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ABSTRACT

This is a hierarchical decimal classification of information related to various types of carcinogenesis (Chemical, viral, hormonal, radiation), cancer demography, and selected descriptive and "in vitro" aspects of cancer pathology. It is a working draft of categories taken from an extensive classification of many fields of biomedical information. Because the classification identifies very small areas of cancer information, it can be used for precise matching of cancer researchers with useful documents or data in information systems, and for detailed analysis of large cancer research programs. (Related Documents are: ED 025 270 and LI 004 018 and LI 004 020.) (Author)

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# CANCER ETIOLOGY AND SELECTED ASPECTS OF CANCER PATHOLOGY: A DECIMAL CLASSIFICATION

(CATEGORIES 51.4 AND 51.5)


## ABSTRACT

This is a hierarchical decimal classification of information related to various types of carcinogenesis (chemical, viral, hormonal, radiation), cancer demography, and selected descriptive and in vitro aspects of cancer pathology. It is a working draft of categories taken from an extensive classification of many fields of biomedical information.

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April 24, 1972

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The use of this classification in an automated information system has been described in the following reference:

J. H. Schneider, "Selective Dissemination and Indexing of Scientific Information", Science 173, 300-308, 1971.

This paper describes the use of these classifications for precise matching of 103 cancer research scientists against a data base of 1,396 articles published in 12 leading cancer research journals.

The development and publication of this classification would have been very difficult without the conscientious effort of Mrs. Kathleen McManus who has worked with these categories for the past six years.

Thanks are also due to Miss Patricia Gorman and Miss Cynthia Friedman who keypunched cards from very rough drafts of the classification, and to Miss Sylvia Daves for help in some of the final stages of computer programming and printing.

John H. Schneider
April 24, 1972

MOST OF THE CATEGORIES CONTAINED IN THIS CLASSIFICATION WERE DEVELOPED IN THE EARLY 60'S. LITTLE TIME HAS BEEN AVAILABLE FOR MODIFYING THE CLASSIFICATION SINCE 1968. AS A RESULT, FAST MOVING FIELDS (SUCH AS CANCER VIROLOGY) ARE NOW CONSIDERABLY OUT OF DATE IN THAT THEY DO NOT CONTAIN CATEGORIES FOR THE MOST RECENT FINDINGS AND DEVELOPMENTS, SUCH AS SPECIFIC ANTICANCER AGENTS, VIRUSES, CARCINOGENIC AGENTS, ETC.

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# CANCER ETIOLOGY AND SELECTED ASPECTS OF CANCER PATHOLOGY: A DECIMAL CLASSIFICATION

## (CATEGORIES 51.4 AND 51.5)

## PREFACE

Hierarchical classifications can be used for two different but related purposes:

1) In Information Systems:

Small areas of information can be precisely identified by categories in a detailed hierarchical decimal classification. These categories can be used to:

a) Index information in published documents,

b) Index information needs of individual scientists, and

c) Match scientists with indexed information and documents.

2) For Detailed Program Analysis:

Hierarchical decimal classifications can be used to organize the scientific content and substance of research programs.

This is accomplished by using categories from the classification to group related research projects together into:

a) Small research units consisting of several related projects,

b) Research areas consisting of several research units, and

c) Large program areas consisting of several research areas.

This clustering and "treeing" of research activities is an essential component of program analysis and program management activities. In addition, the hierarchical structure permits analysis at any desired level of detail -- ranging from broad summaries and overviews to individual research projects.

## CURRENT STATUS OF THIS CLASSIFICATION

A preliminary version of the entire cancer classification was published in 1968.* At that time, it consisted of typewritten pages which were subsequently modified by handwritten insertions and changes.

Since that time, it has been converted to punched cards, and an automated system called AUTOKLS has been written in PL/I to convert the cards to magnetic tape records. These records can be updated by another AUTOKLS program and can be printed out in indented, hierarchical format for use by indexers.

Still other parts of the AUTOKLS system are used for keeping track of cross-references between categories, for linking terms in alphabetic indexes to specific categories in the classification, and for updating the alphabetic index entries.

As mentioned in the abstract, this published version is a PRELIMINARY, WORKING DRAFT at a very early stage after the difficult conversion from typed and handwritten pages to punched cards.

For these reasons, there are some gaps and omissions in subject coverage, some topics covered only in broad outline with insufficient detail, some cases where several categories deal with the same topic in almost the same way, occasional cross-references that do not refer to the correct category number, and probably some spelling and simple clerical errors that have not yet been noticed. In addition, some cross-references refer to categories in portions of the classification which are not yet published.

However, because THIS CLASSIFICATION IS CONSTANTLY EVOLVING AND DEVELOPING it will never be available in final, fixed form. Instead, it will be published periodically to show current status. (Computer printouts of the most up-to-date version for use by indexers can easily be prepared weekly or monthly.) Most of the problems mentioned in the last paragraph will be corrected in the course of continuing updating and revision.

* John Schneider, Hierarchical Decimal Classification of Information Related to Cancer Research, (National Cancer Institute, Bethesda, Maryland). February 1968. 116 pp. (Available from National Technical Information Service, as PB-177-209.)

## OUTLINE OF MAJOR CATEGORIES IN THIS DOCUMENT

51.4 CANCER ETIOLOGY (INCLUDING ALL TYPES OF CARCINOGENESIS AND DEMOGRAPHY).
This major category also includes studies of co-carcinogens, mechanism of carcinogen and co-carcinogen action, cancer biometry, and cancer epidemiology.

51.40 Etiology (including carcinogenesis and demography) of specific types of cancer in humans.

51.41 Etiology (including experimental carcinogenesis and biometrics) of specific types of cancer in animals.

51.42 CO-CARCINOGENS, including theoretical aspects and general information about co-carcinogens and stages in tumor development.

51.43 Carcinogenic effect of environmental agents and endogenous pathological conditions (non-microbial).

51.44 Carcinogenic action of RADIATION.

51.45 VIRUSES AND OTHER MICROBES AS CARCINOGENIC AGENTS: MECHANISM OF VIRAL CARCINOGENESIS.

51.46 CARCINOGENIC CHEMICALS: CHEMICAL CARCINOGENESIS.

51.47 Carcinogenesis related to HORMONES, endocrine glands and secondary sex tissues.

51.48 Carcinogenic action of other agents, including agents from plant and animal sources.

51.5 CANCER PATHOLOGY AND CYTOLOGY (mostly descriptive studies).

51.51 Characteristics of cancerous tissues in vitro:
Tissue culture, chromosomes, sub-cellular studies, electron microscopy.

51.52 to 51.58 DESCRIPTIONS OF CANCER OF SPECIFIC ORGAN SYSTEMS IN HUMANS AND ANIMALS.

51.525 Leukemia, lymphoma, and related types of cancer.
51.53 Cancer of muscle tissues: myomas.
51.54 Cancer of the kidney, bladder, and associated ducts and tracts.
51.552 Lung cancer.
51.553 Liver cancer.
51.554 Gastroentestinal cancer.
51.555 Cancer of reproductive organs and tissues.
51.56 Cancer of the nervous tissue and brain: brain tumors.
51.57 Cancer of the sense organs.
51.582 Cancer of connective tissues.
51.583 Skin cancer.
51.584 Bone cancer.
51.59 Cancer of selected body structures.

(The complete list of all subdivisions included in the outline above begins on page 1 and consists of 2,223 individual categories.)

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## OUTLINE OF ALL MAJOR CATEGORIES FOR CANCER RESEARCH INFORMATION

51.1 Selected General Topics Related to Cancer Research

51.2 Clinical Aspects of Diagnosis and Treatment

51.3 Pre-Clinical Aspects of Diagnosis and Treatment

51.4 Cancer Epidemiology and Etiology, including all types of Carcinogenesis and Co-Carcinogenesis

51.5 Cancer Pathology; Related Physiology, Cytology, and Tissue Culture Studies

51.6 Biochemistry of Tumors and Tumor-Bearing Hosts

51.7 Host-Tumor Interactions

51.8 Cancer in Specific Types of Hosts

51.4 CARCINOGENESIS, CO-CARCINOGENESIS, CANCER ETIOLOGY, CANCER BIOMETRY, AND CANCER EPIDEMIOLOGY.

51.40 ETIOLOGY, CARCINOGENESIS, EPIDEMIOLOGY, PREMALIGNANT PATHOLOGY, AND RELATED STUDIES OF HUMAN CANCER.
51.400 GENERAL CANCER EPIDEMIOLOGY AND CANCER BIOMETRY (HUMANS).
INCIDENCE, FREQUENCY, AND OCCURRENCE OF CANCER.
SEE ALSO: 51.43212 FOR EPIDEMIOLOGICAL STUDIES RELATING CANCER INCIDENCE TO SPECIFIC OCCUPATIONS OR INDUSTRIAL ENVIRONMENTS OR INDUSTRIAL CHEMICALS.
SEE ALSO: 51.4412 FOR EPIDEMIOLOGICAL STUDIES OF CANCER INDUCTION BY RADIATION.
SEE ALSO: 51.45114 FOR EPIDEMIOLOGICAL ASPECTS OF VIRAL CARCINOGENESIS.
SEE ALSO: 51.2015 FOR END RESULTS STUDIES OF CANCER THERAPY.
SEE ALSO: 51.410 FOR SIMILAR STUDIES IN ANIMALS.
51.4001 GENERAL.
51.40011 OPEN.
51.40012 TEXTS, BOOKS AND REVIEW ARTICLES ON CANCER EPIDEMIOLOGY.
51.40013 CONFERENCES, SYMPOSIA, AND COURSES ON CANCER EPIDEMIOLOGY.
51.40014 METHODS OF CANCER EPIDEMIOLOGY AND SOURCES OF CANCER PATIENT DATA.
51.400141 GENERAL.
51.400142 CANCER SURVEYS IN GENERAL AND RELATED STATISTICAL METHODS.
51.400143 CANCER REGISTRYS.
51.400144 SOURCES OF INFORMATION ON CANCER INCIDENCE.
51.40014401 GENERAL.
51.40014402 DEATH CERTIFICATES.
51.40014403 DOCTORS' REPORTS.
51.40014404 HOSPITAL RECORDS.
51.4002 CANCER IN PATIENTS OF DIFFERENT AGES.
AGE-SPECIFIC INCIDENCE RATES.
51.40021 GENERAL.
51.40022 INCIDENCE OF CANCER IN CHILDREN (CHILDHOOD NEOPLASIA).
51.40023 INCIDENCE OF CANCER IN TEEN-AGERS AND ADULTS.
51.40024 INCIDENCE OF NEOPLASIA IN THE AGED.
RELATION OF AGE TO CANCER INCIDENCE.
51.4003 OPEN.
51.4004 EPIDEMIOLOGIC STUDIES OF SELECTED RACIAL, ETHNIC, RELIGIOUS, AND SOCIAL GROUPS.
SEE ALSO: 51.40[illegible]5 FOR CANCER INCIDENCE IN HIGHLY INBRED POPULATIONS.
SEE ALSO: 51.4[illegible] FOR STUDIES IN SPECIFIC GEOGRAPHICAL AREAS.
51.400401 GENERAL.
51.400402 CANCER EPIDEMIOLOGY IN JEWS.
51.400403 CANCER EPIDEMIOLOGY IN NEGROES.
51.400454 STUDIES OF CATHOLIC ORDERS (NUNS, BROTHERS, PRIESTS).
51.400455 STUDIES OF 7TH DAY ADVENTISTS.
51.4005 STUDIES ON IMMIGRANT POPULATIONS.
51.400501 GENERAL.
51.400502 IMMIGRANT POPULATIONS FROM EUROPE AND RUSSIA TO AMERICA: COMPARISON OF CANCER IN NORWEGIAN IMMIGRANTS WITH CANCER IN RELATIVES STILL IN NORWAY.
51.400503 IMMIGRANT POPULATIONS FROM JAPAN AND THE FAR EAST.
51.400504 OTHER IMMIGRANT POPULATIONS.
51.4006 INCIDENCE OF CANCER IN DIFFERENT GEOGRAPHICAL AREAS.
SEE ALSO: 51.4005 FOR IMMIGRANT STUDIES.
51.40061 GENERAL.
51.400611 SPATIAL-TEMPORAL AGGREGATION AND CLUSTERS OR "MICROEPIDEMIOLOGY" OF CANCER.
SEE ALSO: 51.4025235 FOR CLUSTERING IN LEUKEMIA.
51.400612 INTERNATIONAL DEATH RATES FROM CANCER AND RELATED STUDIES.
51.40062 CANCER INCIDENCE IN NORTH AMERICA.
51.400621 GENERAL.
51.400622 CANCER INCIDENCE IN ISLANDS NEAR NORTH AMERICA.
51.400622GRE GREENLAND.
51.400622ICE ICELAND.
51.400623 CANADA.
51.400624 UNITED STATES AND ALASKA (ADD FIRST FOUR LETTERS OF STATE FOR INDIVIDUAL STATES AND ARRAIGE IN ALPHABETICAL ORDER).
51.400624ALAS ALASKA AND ALEUTIAN ISLANDS.
51.400624CALI CALIFORNIA.
51.400624CONN CONNECTICUT.

51.400624HAWA HAWAII.
51.400625 MEXICO AND CENTRAL AMERICA. (ADD FIRST FOUR LETTERS OF COUNTRY NAME).
51.40063 CANCER INCIDENCE IN SOUTH AMERICA.
51.40063BRAZ BRAZIL.
51.40063COLU COLUMBIA.
51.40064 CANCER INCIDENCE IN EUROPE.
51.40064FINL FINLAND.
51.40064FRAN FRANCE.
51.40064GERM GERMANY.
51.40064SWED SWEDEN.
51.40064SWIT SWITZERLAND.
51.40065 CANCER INCIDENCE IN RUSSIA AND EAST EUROPEAN SATELLITES.
51.40066 CANCER INCIDENCE IN THE MIDDLE EAST AND NEAR EAST (INCLUDING TURKEY AND AFGHANISTAN BUT NOT EGYPT).
51.40066ISRE ISRAEL.
51.40066LEBA LEBANON.
51.40067 AFRICA AND NEARBY ISLANDS (LIST INDIVIDUAL COUNTRIES IN ALPHABETICAL ORDER).
51.40067EGYP EGYPT.
51.40067GABO GABON.
51.40067KENY KENYA.
51.40067NIGE NIGERIA.
51.40067UGAN UGANDA.
51.40068 CANCER INCIDENCE IN INDIA, PAKISTAN, AND FAR EAST (INCLUDING JAPAN AND INDONESIA).
51.40068CHIN CHINA.
51.40068INDI INDIA.
51.40068JAPA JAPAN.
51.40068PAKE EAST PAKISTAN.
51.40068PAKW WEST PAKISTAN AND SWAT.
51.40068TAIW TAIWAN.
51.40069 CANCER INCIDENCE IN OTHER PARTS OF THE WORLD.
51.40069AU AUSTRALIA.
51.40069PI PACIFIC ISLANDS (OTHER THAN JAPAN, NEW GUINEA AND INDONESIA).
51.4007 UNUSUAL CLUSTERING OF CANCER PATIENTS NOT INCLUDED ELSEWHERE.
SEE ALSO: 51.4025235 FOR "CLUSTERING" OF LEUKEMIA.
SEE ALSO: 51.45114 FOR CANCER CLUSTERS WITH STRONG EVIDENCE OF AN INFECTIOUS AGENT.
51.400701 CANCER CLUSTERS IN GENERAL.
51.400702 INCIDENCE OF CANCER IN FAMILIES AND FAMILY GROUPS.
INCIDENCE OF CANCER IN TWINS AND SIBLINGS.
SEE ALSO: 51.4013 FOR GENETIC FACTORS RELATED TO CANCER INCIDENCE IN HUMANS.
SEE ALSO: 51.40135 FOR CANCER STUDIES IN HIGHLY INBRED POPULATIONS.
51.4008 CANCER IN UNUSUAL ENVIRONMENTS.
51.400801 CANCER INCIDENCE DURING LONG TERM STAYS IN MENTAL HOSPITALS.
51.4009 OTHER TYPES OF CANCER EPIDEMIOLOGIC DATA.
51.400901 INCIDENCE OF MULTIPLE PRIMARY CANCER.
COOCCURENCE OF TWO DIFFERENT CANCERS IN THE SAME INDIVIDUAL.
SEE ALSO: 51.43252803 FOR TUMORS ASSOCIATED WITH LEUKEMIA AND LYMPHOMA.
SEE ALSO: 51.402526803 FOR TUMORS ASSOCIATED WITH LEUKEMIA AND LYMPHOMA.
SEE ALSO: 51.40154 FOR TUMORS ASSOCIATED WITH OTHER LYMPHORETICULAR PATHOLOGY.
51.400* ALL CANCER EPIDEMIOLOGY NOT INCLUDED ELSEWHERE IN 51.400 OR IN CROSS REFERENCES INCLUDED IN 51.400.
51.401 SELECTED FACTORS AND ENDOGENOUS CONDITIONS RELATED TO THE OCCURRENCE AND DEVELOPMENT OF HUMAN CANCER.
SEE ALSO: 51.47 FOR RELATION OF HORMONAL ENVIRONMENT TO THE DEVELOPMENT OF CANCER.
SEE ALSO: 51.515 FOR PROPERTIES OF MALIGNANT CELLS AND FACTORS INFLUENCING METASTASIS.
SEE ALSO: 51.7 FOR HOST-TUMOR INTERACTIONS AND EFFECT OF VARIOUS ENDOGENOUS HOST FACTORS ON THE GROWTH OF CANCER.
SEE ALSO: 51.74 FOR IMMUNOLOGICAL RESPONSE OF HOSTS TO TUMORS.
SEE ALSO: 51.43 FOR CARCINOGENIC ACTIVITY OF ENVIRONMENTAL AGENTS.
SEE ALSO: 51.45 FOR RELATION OF VIRUSES AND OTHER INFECTIOUS AGENTS TO CANCER DEVELOPMENT.

51.4011 GENERAL.
51.4012 NUTRITIONAL FACTORS RELATED TO THE OCCURRENCE AND DEVELOPMENT OF CANCER IN HUMANS.
SEE ALSO: 51.4102 FOR ROLE OF NUTRITIONAL FACTORS IN ANIMAL CANCER.
SEE ALSO: 51.4322 FOR CARCINOGENICITY ASSOCIATED WITH TRACE ELEMENTS.
51.40121 GENERAL ASPECTS OF EFFECT OF DIET ON CANCER INCIDENCE.
51.40122 EFFECT OF PROTEIN.
51.40123 EFFECT OF LIPID.
51.40124 EFFECT OF CARBOHYDRATE.
51.40125 EFFECT OF VITAMINS.
51.4013 GENETIC (HEREDITARY) FACTORS RELATED TO THE OCCURRENCE AND DEVELOPMENT OF CANCER IN HUMANS.
SEE ALSO: 51.5112 FOR CHROMOSOME ABNORMALITIES IN CANCEROUS TISSUES.
SEE ALSO: 51.400702 FOR INCIDENCE OF CANCER IN FAMILIES.
SEE ALSO: 51.40152 FOR RELATIONSHIP OF CONGENITAL DEFECTS TO CANCER.
SEE ALSO: 51.5832 FOR GENETICS OF BASAL CELL NEVUS SYNDROME.
51.40131 GENERAL: INHERITED SUSCEPTIBILITY TO CANCER.
51.40132 EPIDEMIOLOGICAL STUDIES OF SPECIFIC SYNDROMES AND PHENOTYPES ASSOCIATED WITH INCREASED INCIDENCE OF CANCER IN HUMANS.
SEE ALSO: 51.74632 FOR RELATION BETWEEN TYPE A BLOOD AND CANCER.
51.40132A01 GENERAL.
51.40132A011 AUTOSOMAL DOMINANT SYNDROMES ASSOCIATED WITH MALIGNANT NEOPLASMS (VERY GENERAL).
51.40132A012 AUTOSOMAL RECESSIVE SYNDROMES ASSOCIATED WITH MALIGNANT NEOPLASMS (VERY GENERAL).
51.40132A02 ATAXIA-TELANGIECTASIA.
51.40132B01 BASAL CELL NEVUS SYNDROME.
SEE ALSO: 51.4083241 FOR MOST INFORMATION.
51.40132B02 BLOOM'S SYNDROME.
51.40132C01 CHEDIAK-HIGASHI.
51.40132D01 DYSKERATOSIS CONGENITA.
51.40132E01 ESOPHAGEAL CARCINOMA.
51.40132E02 MULTIPLE EXOSTOSES.
51.40132F01 FANCONI'S ANEMIA.
51.40132G01 GARDNER'S SYNDROME.
51.40132M01 MALIGNANT MELANOMA.
51.40132M02 INTRAOCULAR MELANOMA.
51.40132N01 NEUROFIBROMATOSIS.
51.40132P01 POLYPOSIS COLI, FAMILIAL.
51.40132P02 PEUTZ-JEGHERS SYNDROME.
51.40132R01 RETINOBLASTOMA, FAMILIAL.
51.40132T01 THYROID CARCINOMA.
51.40132T02 TUBEROUS SCLEROSIS.
51.40132T03 TYLOSIS.
51.40132T04 THROMBOCYTOPENIA WITH ABSENT RADII.
51.40132V01 VON HIPPEL-LINDAU DISEASE.
51.40132W01 WERNER'S SYNDROME.
51.40132W02 WISKOTT-ALDRICH SYNDROME.
51.40132X01 XERODERMA PIGMENTOSUM.
51.40133 RELATION OF SEX DIFFERENCES TO CANCER INCIDENCE.
COMPARISON OF CANCER INCIDENCE IN MALES AND FEMALES.
51.40134 RELATION OF CHROMOSOME DEFECTS TO CANCER INCIDENCE.
51.40135 CANCER INCIDENCE IN HIGHLY INBRED POPULATIONS.
51.4013501 GENERAL.
51.4013502 POSSIBLE RELATION OF CHORIOCARCINOMA TO INBREEDING.
51.4014 OTHER ASPECTS OF HOST INFLUENCES ON TUMOR DEVELOPMENT IN HUMANS.
SEE ALSO: 51.7 FOR HOST-TUMOR INTERACTIONS (INVASIVENESS, METASTASIS, VASCULARIZATION, AND TUMOR IMMUNOLOGY).
51.401401 OPEN.
51.4015 RELATION OF CANCER INCIDENCE TO GENERAL TYPES OF NON-MICROBIAL PATHOLOGY NOT INCLUDED ABOVE.
SEE ALSO 51.402 - 51.409 FOR PREMALIGNANT PATHOLOGY LIMITED TO SPECIFIC TISSUES AND ORGAN SYSTEMS.
SEE ALSO: 51.40132 FOR SPECIFIC INHERITED DISEASES ASSOCIATED WITH CANCER.
SEE ALSO: 51.5113 FOR CYTOLOGY OF CANCEROUS AND PRECANCEROUS CELLS (GENERAL).
SEE ALSO: 51.45 FOR VIRAL DISEASES AND OTHER INFECTIOUS DISEASES RELATED TO CANCER.
SEE ALSO: 51.21804 FOR USE OF CLINICAL SYMPTOMS TO DIAGNOSE CANCER.
51.40151 GENERAL.

51.40152 CONGENITAL DEFECTS RELATED TO CANCER OCCURRENCE.
SEE ALSO: 51.4025265 FOR RELATION OF CONGENITAL DEFECTS TO LEUKEMIA.
SEE ALSO: 51.400901 FOR CO-OCCURRENCE OF TWO OR MORE PRIMARY CANCERS IN THE SAME INDIVIDUAL.
51.4015201 GENERAL.
51.4015202 RELATION OF MONGOLISM TO OCCURRENCE OF CANCER (GENERAL).
51.40153 RELATION OF IMMUNOLOGICAL PATHOLOGY AND ALTERED HOST DEFENSE MECHANISMS TO THE OCCURRENCE AND DEVELOPMENT OF HUMAN CANCER.
SEE ALSO: 51.40132 FOR CERTAIN INHERITED DISEASES WHICH MAY INVOLVE IMMUNE DEFICIENCY.
51.401531 GENERAL.
51.401532 INCIDENCE IN PATIENTS WITH AUTOIMMUNE DISEASES.
51.40153201 GENERAL.
51.40153202 CANCER INCIDENCE ASSOCIATED WITH PERNICIOUS ANEMIA.
51.40153203 CANCER INCIDENCE ASSOCIATED WITH ULCERATIVE COLITIS.
51.401533 CANCER INCIDENCE IN PATIENTS WITH ALLERGIES, HYPERSENSITIVITY REACTIONS, AND HYPERIMMUNE DISEASES.
51.401534 CANCER INCIDENCE IN PATIENTS WITH DECREASED IMMUNE COMPETENCE.
51.4015341 GENERAL.
51.4015342 CANCER INCIDENCE IN IMMUNOSUPPRESSED PATIENTS.
CANCER INCIDENCE IN PATIENTS WITH TRANSPLANTED TISSUES (USUALLY IMMUNOSUPPRESSED).
51.4015343 CANCER INCIDENCE IN PATIENTS WITH HYPOIMMUNE DISEASES.
51.401534301 CANCER INCIDENCE ASSOCIATED WITH AGAMMAGLOBULINEMIA (BRUTON TYPE AND OTHER TYPES).
51.40154 RELATION OF LYMPHORETICULAR PATHOLOGY TO CANCER OCCURRENCE IN OTHER TISSUES. CANCER OCCURRENCE IN OTHER TISSUES.
SEE ALSO: 51.4025 FOR PREMALIGNANCY OF LYMPHORETICULAR TISSUES.
51.40155 RELATION OF ABNORMAL (AND NORMAL) ENDOGENOUS METABOLITES TO THE OCCURRENCE AND DEVELOPMENT OF HUMAN CANCER.
SEE ALSO: 51.4143 FOR CARCINOGENICITY OF DERIVATIVES TRYPTOPHANE METABOLITES IN ANIMALS.
51.401551 GENERAL.
51.401552 PATHOLOGY INVOLVING GAS TRANSPORT, GAS EXCHANGE, BODY FLUIDS, AND ELECTROLYTES AS RELATED TO CANCER INCIDENCE.
SEE ALSO: 51.41251 FOR LYMPHOEDEMA IN ANIMALS.
51.40156 OTHER TYPES OF PATHOLOGY CO-OCCURRING WITH CANCER (SUB-DIVIDED BY ORGAN SYSTEMS).
51.4015653 CIRRHOSIS OF THE LIVER ASSOCIATED WITH CANCER OF THE MOUTH AND PHARYNX.
51.4016 EPIDEMIOLOGIC STUDIES OF RELATION BETWEEN VARIOUS ENVIRONMENTAL OR EXOGENOUS AGENTS OR FACTORS AND CANCER INCIDENCE IN HUMANS.
SEE ALSO: 51.43 FOR STUDIES OF SELECTED ENVIRONMENTAL AGENTS RELATED TO CANCER.
SEE ALSO: 51.4412 FOR EPIDEMIOLOGICAL STUDIES OF RADIATION CARCINOGENESIS.
SEE ALSO: 51.45 FOR VIRAL AND OTHER INFECTIOUS AGENTS IN CARCINOGENESIS.
SEE ALSO: 51.451 FOR CONTACT WITH ANIMALS IN RELATION TO CANCER INCID
SEE ALSO: 51.46 FOR CHEMICAL CARCINOGENESIS.
SEE ALSO: 51.47 FOR HORMONAL CARCINOGENESIS.

SEE ALSO: 51.43 FOR RELATION OF SMOKING AND CANCER.
51.401601 OPEN.
51.401602 RELATION OF TRAUMA TO CANCER OCCURRENCE IN HUMANS.
SEE ALSO: 51.4242 FOR SIMILAR INFORMATION IN ANIMALS.
51.401603 RELATION OF PHYSICAL FORCES AND ENVIRONMENTAL STRESS (HIGH ALTITUDES, CLIMATE, JETS) TO CANCER INCIDENCE IN HUMANS.
SEE ALSO: 51.4242 FOR SIMILAR INFORMATION IN ANIMALS.
51.4017 RELATION OF MISCELLANEOUS FACTORS TO CANCER INCIDENCE.
51.401701 RELATION OF MOTHER'S AGE TO CANCER INCIDENCE IN CHILD.
51.401702 RELATION OF PERSONALITY AND PSYCHOLOGICAL FACTORS (STRESS) TO CANCER INCIDENCE.
51.401703 RELATION OF BREAST FEEDING AND CANCER INCIDENCE.
51.4017031 GENERAL.
51.4017032 EFFECT OF CANCER INCIDENCE IN MOTHER.
51.4017033 EFFECT OF CANCER INCIDENCE IN CHILD.

NOTE: THE FOLLOWING CATEGORIES (51.402 TO 51.409) DEAL WITH CARCINOGENESIS AND EPIDEMIOLOGY OF CANCER IN SPECIFIC ORGANS AND SYSTEMS IN HUMANS.

MORE GENERAL ASPECTS OF EPIDEMIOLOGY ARE IN CLASSES 51.400 AND 51.401. STUDIES OF SPECIFIC CLASSES OF AGENTS ARE IN CLASSES 51.42 TO 51.49.

51.402 ETIOLOGY, EPIDEMIOLOGY, PREMALIGNANT PATHOLOGY AND OTHER CARCINOGENESIS STUDIES OF TUMORS OF THE CARDIOVASCULAR, LYMPHORETICULAR, AND RETICULOENDOTHELIAL SYSTEM IN HUMANS.
SEE ALSO: 51.40154 FOR RELATION OF LYMPHORETICULAR ABNORMALITIES TO OCCURRENCE OF CANCER IN OTHER ORGANS.
51.4021 GENERAL.
51.4022 ETIOLOGY OF HEART CANCER.
51.4023 OPEN.
51.4024 ETIOLOGY OF BLOOD VESSEL TUMORS (ANGIOMAS).
51.4025 CARCINOGENESIS, ETIOLOGY, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF LEUKEMIA IN HUMANS.
SEE ALSO: 51.4532 FOR THE VIRAL ETIOLOGY OF LEUKEMIA.
SEE ALSO: 51.525 FOR NON-VIRAL ASPECTS OF LEUKEMIA (ONCE IT HAS DEVELOPED).
51.40251 GENERAL.
51.40252 EPIDEMIOLOGICAL EVIDENCE FOR RADIATION AS A FACTOR IN THE ETIOLOGY OF LEUKEMIA.
51.402521 GENERAL.
51.402522 LEUKEMIA OCCURRENCE IN RADIOLOGISTS.
51.402523 LEUKEMIA INCIDENCE IN RADIOISOTOPE WORKERS.
51.402524 LEUKEMIA INCIDENCE IN SURVIVORS OF THE ATOMIC BOMBS.
51.402525 LEUKEMIA INCIDENCE IN PATIENTS WHO RECEIVED RADIOTHERAPY OR DIAGNOSTIC X-RAYS.
51.4025251 GENERAL.
51.4025252 EFFECT OF PRENATAL INTER-UTERINE EXPOSURE DURING PREGNANCY.
51.4025253 IN CHILDREN WHO HAD RECEIVED RADIATION (FOR THYMIC ENLARGEMENT AND OTHER CONDITIONS).
51.4025254 IN ADULTS WHO HAD RECEIVED RADIOTHERAPY (FOR CANCER, FOR ANKYLOSING SPONDYLITIS, AND OTHER CONDITIONS).
51.40253 EPIDEMIOLOGICAL EVIDENCE RELATED TO INFECTIOUS AGENTS (VIRUSES) AS A FACTOR IN THE ETIOLOGY OF LEUKEMIA IN HUMANS.
SEE ALSO: 51.45252 FOR STUDIES OF VIRUS PARTICLES IN PATIENTS WITH LEUKEMIA.
51.402531 GENERAL.
51.402532 LEUKEMIA IN CHILDREN OF MOTHERS WITH LEUKEMIA DURING PREGNANCY.
51.402533 LEUKEMIA IN SIBLINGS AND OTHER MEMBERS OF FAMILY GROUPS.
51.402534 LEUKEMIA IN INDIVIDUALS WHO HAVE RECEIVED TRANSFUSIONS (INCLUDING CHILDREN RECEIVING EXCHANGE TRANSFUSIONS).
51.402535 "CLUSTERS" OF LEUKEMIA CASES IN LIMITED GEOGRAPHICAL AREAS (LEUKEMIA "AGGREGATES") AND IN SHORT PERIODS OF TIME.
GEOGRAPHICAL LOCATION OF PATIENTS WITH LEUKEMIA.
SEE ALSO: 51.400611 FOR SPATIAL-TEMPORAL AGGREGATIONS OF CANCER IN GENERAL.
51.40254 TRANSMISSABILITY OF LEUKEMIA FROM ANIMALS TO MAN AND RELATED ZOOEPIDEMIOLOGICAL STUDIES.
POSSIBLE ROLE OF DOGS, CATS, BIRDS, OTHER PETS, VETERINARY ANIMALS, AND OTHER ANIMALS.
51.40255 DRUG TOXICITY (DRUG-INDUCED BONE MARROW DEPRESSION) AS A FACTOR IN LEUKEMIA ETIOLOGY.
51.4025501 GENERAL.
51.4025502 PRODUCTION OF LYMPHOMA, PSEUDO LYMPHOMA, AND LYMPADENOPATHIES BY ANTICONVULSANTS (MEPHENYTOIN, DILANTIN, MYSOLINE, CELONTIN, MEBARAL).
51.4025503 LEUKEMIA ASSOCIATED WITH BENZENE POISONING.
51.40256 CORRELATION OF LEUKEMIA INCIDENCE IN HUMANS WITH THE OCCURRENCE OF OTHER DISEASES AND PATHOLOGICAL CONDITIONS.
51.402561 GENERAL.
51.402562 CORRELATION OF LEUKEMIA WITH INFECTIOUS DISEASES (VIRUS, BACTERIA, PPLO).
51.402562A11 GENERAL.
51.402562V11 RELATION TO VIRAL HEPATITIS.
51.402562M11 RELATION TO MONONUCLEOSIS.
51.402562H11 RELATION TO HERPES DISEASES.
51.402562M12 RELATION TO MUMPS.
51.402562M13 RELATION TO MEASLES.
51.402562C13 RELATION TO CYTOMEGALIC INCLUSION DISEASE (SALIVARY GLAND VIRUS ETIOLOGY).
51.402562011 (NOTE 0). RELATION TO ORNITHOSIS (PSITTACOSIS OR PARROT FEVER).

51.402562B11 CORRELATION WITH BACTERIAL DISEASES.
51.402562P11 CORRELATION OF PPLO OR PPLO INFECTIONS WITH LEUKEMIA.
SEE ALSO: 51.45862 FOR ISOLATION OF PPLO FROM PATIENTS WITH CANCER IN GENERAL.
51.402563 CORRELATION OF LEUKEMIA WITH CONGENITAL DEFECTS.
SEE ALSO: 51.5112 FOR CHROMOSOME ABNORMALITIES IN PATIENTS WITH CANCER.
SEE ALSO: 51.525214 FOR CHROMOSOME DEFECTS IN LEUKEMIC CELLS.
51.4025631 GENERAL.
51.4025632 CORRELATION OF LEUKEMIA AND LYMPHOMA WITH MONGOLISM (DOWN'S SYNDROME OR TRISOMY 21).
LEUKEMIA IN SIBS OR PARENTS OF MONGOLS.
SEE ALSO: 51.40152 FOR RELATION OF MONGOLISM TO OCCURRENCE OF CANCER (GENERAL).
51.4025633 CONGENITAL LEUKEMIA IN NEWBORN.
51.402564 CORRELATION OF LEUKEMIA AND LYMPHOMA WITH IMMUNE DISEASES AND THYMUS PATHOLOGY IN HUMANS.
51.4025641 GENERAL.
51.4025642 CORRELATION WITH HYPOIMMUNE DISEASES AND IMMUNE DEFICIENCY SYNDROMES.
51.402564201 GENERAL.
51.402564202 AGAMMAGLOBULINEMIA.
51.402564203 HYPOGAMMAGLOBULINEMIA.
51.402564204 ATAXIA-TELANGIECTASIA.
51.4025643 CORRELATION WITH HYPERIMMUNE DISEASES.
51.402564301 GENERAL.
51.402564302 SJOGREN'S DISEASE.
51.402564302 RHEUMATOID ARTHRITIS.
51.402564304 SYSTEMIC LUPUS ERYTHEMATOSIS (SLE OR LE).
51.4025644 CORRELATION OF LEUKEMIA WITH THYMUS PATHOLOGY.
51.402568 OTHER CORRELATIONS IN HUMANS.
51.40256801 CORRELATION OF LEUKEMIA INCIDENCE WITH AGE OF MOTHER.
51.40256802 CORRELATION WITH MISCARRIAGES.
51.40256803 CORRELATION WITH OTHER TYPES OF CANCER.
51.4026 ETIOLOGY, EPIDEMIOLOGY AND CARCINOGENESIS OF LYMPHOMAS.
SEE ALSO: 51.4532 FOR VIRAL ETIOLOGY OF BURKITT LYMPHOMAS AND SIMILAR LYMPHATIC NEOPLASMS.
51.40261 GENERAL.
51.40262 ETIOLOGY OF SPECIFIC TYPES OF LYMPHOMAS.
51.40262B1 ETIOLOGY OF BURKITT'S LYMPHOMA.
51.40262H1 ETIOLOGY OF HODGKINS DISEASE.
51.40262M1 ETIOLOGY OF MYCOSIS FUNGOIDES.
51.4027 ETIOLOGY, PREMALIGNANT PATHOLOGY, EPIDEMIOLOGY, AND RELATED STUDIES OF OTHER HUMAN RETICULOENDOTHELIAL NEOPLASMS NOT INCLUDED IN 51.4025 OR 51.4026.
51.403 CARCINOGENESIS AND ETIOLOGY OF MUSCLE TUMORS; PREMALIGNANT MUSCLE PATHOLOGY.
51.404 CARCINOGENESIS AND ETIOLOGY OF TUMORS OF THE KIDNEY, BLADDER, AND URINARY SYSTEM.
51.4041 GENERAL.
51.4042 CARCINOGENESIS AND ETIOLOGY OF KIDNEY TUMORS; PREMALIGNANT KIDNEY PATHOLOGY.
51.4043 CARCINOGENESIS AND ETIOLOGY OF URINARY SYSTEM TUMORS.
51.404301 GENERAL.
51.404302 PREMALIGNANCY AND ETIOLOGY OF TUMORS OF THE BLADDER, URETER, URETHRA AND RELATED TISSUES.
SEE ALSO: 51.62233 FOR TRYPTOPHANE METABOLISM AND METABOLITES IN TUMOR-BEARING HOSTS (INCLUDING PATIENTS WITH BLADDER CANCER).
SEE ALSO: 51.4342 FOR CORRELATION OF BLADDER CANCER WITH SMOKING.
SEE ALSO: 51.4143 FOR CARCINOGENICITY OF TRYPTOPHANE METABOLITES IN ANIMALS.
SEE ALSO: 51.4603 FOR CARCINOGENICITY OF AROMATIC AMINES (BLADDER CARCINOGENS).
51.404303 RELATION OF HUMAN BLADDER TUMORS TO DRUGS, TOXIC AGENTS, AND UNUSUAL FOODS.
51.404303C11 CYCLAMATES AND BLADDER CANCER IN HUMANS.
51.404303C12 CHLORNAPHAZIN (FOR POLYLYCYTHEMIA VERA) AND BLADDER CANCER.
51.405 ETIOLOGY, CARCINOGENESIS, EPIDEMIOLOGY, AND RELATED PREMALIGNANT PATHOLOGY OF SELECTED INTERNAL ORGANS IN HUMANS.
SEE ALSO: 51.47 FOR CARCINOGENESIS AND PRECANCEROUS PATHOLOGY OF ENDOCRINE GLAND TUMORS, AND THE GENITAL AND REPRODUCTIVE ORGANS.

51.40501 GENERAL.
CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF VISCERAL AND PERITONEAL TUMORS IN HUMANS.
51.4050101 OPEN.
51.4050102 CARCINOGENESIS AND EPIDEMIOLOGY OF MESOTHELIOMAS. INDUCTION OF MESOTHELIOMAS BY ASBESTOS.
51.4051 CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF EXOCRINE GLAND TUMORS IN HUMANS.
51.40511 GENERAL.
51.40512 SALIVARY GLAND TUMORS.
51.4052 CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF CANCER OF THE LUNG, THE TRACHEO-BRONCHIAL SYSTEM, AND RELATED TISSUES IN HUMANS.
SEE ALSO: 51.4342 FOR OTHER INFORMATION ABOUT CARCINOGENIC ACTIVITY OF CIGARETTE SMOKE.
51.40521 GENERAL.
51.40522 EPIDEMIOLOGICAL STUDIES AND SURVEYS.
51.40523 RELATION OF CIGARETTES AND OTHER TOBACCO PRODUCTS TO LUNG CANCER.
51.40524 OTHER ASPECTS OF LUNG CANCER ETIOLOGY AND RELATED PREMALIGNANT PATHOLOGY IN HUMANS.
51.4053 CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF LIVER TUMORS (HEPATIC CANCER) IN HUMANS.
51.4054 CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF GASTROINTESTINAL TUMORS IN HUMANS.
51.40541 GENERAL.
51.40542 CARCINOGENESIS OF GASTROINTESTINAL MUCOSA (GENERAL).
SEE ALSO: 51.4091 FOR CARCINOGENESIS OF ORAL MUCOSA.
51.40543 CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF ESOPHAGEAL CANCER.
51.405431 GENERAL.
51.405432 ESOPHAGEAL CANCER IN SPECIFIC GROUPS OF PEOPLE.
51.4054321 GENERAL.
51.4054322 ESOPHAGEAL CANCER IN THE TRANSKEIAN BANTU AND IN CURACAO.
51.40544 CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF STOMACH CANCER IN HUMANS.
51.405441 GENERAL.
51.405442 PRE-CANCEROUS PATHOLOGY OF THE STOMACH (OR STOMACH AND INTESTINE) AND ITS RELATION TO CANCER IN HUMANS.
51.40544201 GENERAL.
51.40544202 STOMACH ULCERS AND ULCERATIVE COLITIS IN RELATION TO STOMACH CANCER ETIOLOGY.
51.40544203 ATROPHIC GASTRITIS AND GASTRIC ATROPHY IN RELATION TO STOMACH CANCER ETIOLOGY.
51.40544204 GASTRIC POLYPS (INFLAMMATORY FIBROID OR GASTRIC NEURAL POLYPS) IN RELATION TO CANCER ETIOLOGY.
51.40544205 PERNICIOUS ANEMIA IN RELATION TO GASTROINTESTINAL CANCER ETIOLOGY.
51.40544206 INTESTINAL METAPLASIA OF THE GASTROINTESTINAL TRACT AS RELATED TO GASTROINTESTINAL CANCER.
51.40544207 ABNORMAL GASTRIC JUICE SECRETION AS RELATED TO GASTROINTESTINAL CANCER.
51.405443 EPIDEMIOLOGIC ASPECTS OF GASTROINTESTINAL CANCER.
51.405444 RELATION OF NUTRITION, DIET, AND DIETARY TOXINS (MYCOTOXINS) TO GASTROINTESTINAL CANCER.
51.405444C11 CEREAL AND GRAIN DIETS IN RELATION TO GASTROINTESTINAL CANCER.
51.405445 RELATION OF DRUGS TO GASTROINTESTINAL CANCER.
51.40545 CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF INTESTINAL AND BOWEL CANCER.
51.40546 CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF CANCER OF THE COLON AND RECTUM.
51.40547 CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF PANCREATIC CANCER.
X 51.4055 ALL CARCINOGENESIS OF THE GONADS AND OTHER SEX-RELATED TISSUES IS IN 51.47.
51.406 CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF TUMORS OF THE NERVOUS SYSTEM.
51.4061 GENERAL.
51.4062 CARCINOGENESIS OF TUMORS OF THE NERVOUS SYSTEM OTHER THAN BRAIN.
51.4065 CARCINOGENESIS OF BRAIN TUMORS.
51.407 CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF TUMORS OF THE SENSE ORGANS.

51.4071 GENERAL.
51.4072 ETIOLOGY AND CARCINOGENESIS OF TUMORS RELATED TO THE EYE.
POSSIBLE GENETIC EYE DEFECT RELATED TO MALIGNANT MELANOMA.
51.4073 ETIOLOGY AND CARCINOGENESIS OF TUMORS RELATED TO THE EAR.
51.408 CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF TUMORS OF CONNECTIVE TISSUES AND MINERALIZED TISSUES IN HUMANS.
51.4081 GENERAL.
51.4082 CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF CONNECTIVE TISSUE TUMORS.
51.40921 GENERAL.
51.40822 ETIOLOGY OF SPECIFIC TYPES OF CONNECTIVE TISSUE TUMORS.
51.408221 CARCINOGENESIS, EPIDEMIOLOGY, AND ETIOLOGY OF LIPOMAS AND OTHER LIPID TISSUE TUMORS.
51.4083 ETIOLOGY, EPIDEMIOLOGY, PREMALIGNANT PATHOLOGY, AND OTHER CARCINOGENESIS OF SKIN CANCER (INCLUDING ALL MELANOMAS).
51.40831 GENERAL.
51.40832 EPIDEMIOLOGY, ETIOLOGY, AND CARCINOGENESIS OF MELANOMAS (INCLUDING NON-CUTANEOUS MELANOMAS).

NOTE: ALL FOLLOWING DIVISIONS OF 51.4083 REFER TO SKIN CANCERS OTHER THAN MELANOMA.

51.40833 HISTOLOGIC AND CYTOLOGIC STUDIES OF OTHER HUMAN SKIN CANCER DEVELOPMENT.
51.40834 PREMALIGNANT LESIONS RELATED TO HUMAN SKIN CANCER ETIOLOGY.
51.40834B11 BASAL CELL NEVUS SYNDROME IN RELATION TO CANCER ETIOLOGY.
51.40834K11 KERATOSIS, (ACTINIC OR SOLAR) AS PRECURSORS OF SKIN CANCER.
51.40834X11 XERODERMA PIGMENTOSUM IN RELATION TO HUMAN SKIN CANCER ETIOLOGY.
51.40835 BIOCHEMICAL AND OTHER APPROACHES TO HUMAN SKIN CANCER ETIOLOGY.
51.40836 ETIOLOGY, EPIDEMIOLOGY, AND CARCINOGENESIS OF SPECIFIC TYPES OF HUMAN SKIN CANCER EXCEPT MELANOMA.
51.408365 ETIOLOGY AND RELATED STUDIES OF APOCRINE AND SEBACEOUS GLAND CANCER IN HUMANS.
51.40837 SPECIFIC AGENTS SUSPECTED OF BEING RELATED TO HUMAN SKIN CANCER ETIOLOGY AND RELATED PREVENTIVE MEASURES.
51.40837S11 THE SUN AND SOLAR RADIATION IN RELATION TO HUMAN SKIN CANCER.
51.40837U11 ULTRAVIOLET RADIATION IN RELATION TO HUMAN SKIN CANCER.
SEE ALSO: 51.40837S01 FOR SOLAR RADIATION ROLE IN HUMAN SKIN CANCER.
51.40837A11 ARSENIC IN RELATION TO HUMAN SKIN CANCER.
RELATION OF SKIN CANCER TO CHRONIC ARSENIC INTAKE (TAIWAN).
51.4084 CARCINOGENESIS, EPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF BONE TUMORS.
DIFFERENCES IN THE OCCURRENCE OF BONE TUMORS BETWEEN MALES AND FEMALES AND BETWEEN U.S. & JAPANESE POPULATIONS.
51.409 CARCINOGENESIS OF TUMORS OF SPECIFIC PARTS OF THE BODY.
51.4091 ETIOLOGY, EPIDEMIOLOGY, CARCINOGENESIS, AND PREMALIGNANT PATHOLOGY OF CANCER OF THE ORAL CAVITY AND ADJACENT AREA IN HUMANS.
51.40911 GENERAL.
51.40912 ETIOLOGY AND RELATED STUDIES OF LIP CANCER IN HUMANS.
51.40913 ETIOLOGY AND RELATED STUDIES OF TONGUE CANCER IN HUMANS.
51.40914 ETIOLOGY AND RELATED STUDIES OF ORAL MUCOSA CANCER IN HUMANS.
51.40915 OTHER ETIOLOGY OF HUMAN CANCER INVOLVING THE MOUTH AND BUCCAL CAVITY.
51.4092 ETIOLOGY, EPIDEMIOLOGY, CARCINOGENESIS, AND PREMALIGNANT PATHOLOGY OF CANCER OF THE NASAL AND THROAT CAVITIES (NASOPHARYNX) IN HUMANS.
51.40921 GENERAL.
51.40922 ETIOLOGY AND RELATED STUDIES OF SINUS CANCER IN HUMANS.
RELATION OF SINUS CANCER TO EXPOSURE TO RADIUM OR PROPANOL MANUFACTURE.
51.40923 ETIOLOGY AND RELATED STUDIES OF OTHER NASAL CAVITY CANCER IN HUMANS.
51.40924 ETIOLOGY AND RELATED STUDIES OF LARYNGEAL CANCER IN HUMANS.
51.40925 ETIOLOGY AND RELATED STUDIES OF PHARYNGEAL AND OTHER THROAT CANCER IN HUMANS.
SEE ALSO: 51.40543 FOR ETIOLOGY OF ESOPHAGEAL CANCER.
51.4093 ETIOLOGY, EPIDEMIOLOGY, AND RELATED STUDIES OF CANCER OF THE HEAD, NECK, JAW, AND FACE IN HUMANS.
SEE ALSO: 51.40512 FOR ETIOLOGY AND RELATED STUDIES OF SALIVARY GLAND CANCER.
51.4094 ETIOLOGY AND RELATED STUDIES OF CANCER INVOLVING THE APPENDAGES IN HUMANS.
51.40941 GENERAL.
51.40942 ARMS.
51.40943 HANDS.

51.40944 FINGERS.
51.40945 LEGS.
51.40946 FEET.
51.40947 TOES.
51.4095 ETIOLOGY AND RELATED STUDIES OF CANCER INVOLVING THE SHOULDERS AND CHEST.
51.40951 GENERAL.
51.40952 SHOULDERS.
51.40953 CHEST.
51.4096 ETIOLOGY AND RELATED STUDIES OF CANCER INVOLVING THE LOWER TRUNK AND HIPS.
51.40961 GENERAL.
51.40962 ABDOMEN.
51.40963 PELVIC AREA.
51.40964 HIPS.

51.41 ETIOLOGY, CARCINOGENESIS, AND PREMALIGNANT PATHOLOGY OF CANCER OF SPECIFIC ORGANS AND TISSUES IN ANIMALS.
SEE ALSO: 51.45 FOR VIRAL ONCOLOGY.
SEE ALSO: 51.46 FOR CHEMICAL CARCINOGENESIS.
SEE ALSO: 51.745 FOR IMMUNE FACTORS AFFECTING GROWTH OF ESTABLISHED TUMORS.
SEE ALSO: 51.8 FOR CARCINOGENESIS IN SPECIFIC TYPES OF ANIMALS.

NOTE: THIS CLASSIFICATION IS SUBDIVIDED LIKE 51.40 WHEN POSSIBLE.

51.410 GENERAL.
51.411 SELECTED FACTORS AND ENDOGENOUS CONDITIONS RELATED TO THE OCCURRENCE AND DEVELOPMENT OF TUMORS IN ANIMALS.
SEE ALSO: 51.424 FOR EXOGENOUS AGENTS (INCLUDING CO-CARCINOGENS) WHICH STIMULATE CANCER INDUCTION BY CARCINOGENIC AGENTS.
SEE ALSO: 51.401 FOR LIST OF RELATED CLASSES.
51.4111 GENERAL.
51.4112 NUTRITIONAL FACTORS RELATED TO THE OCCURRENCE OF CANCER IN ANIMALS.
SEE ALSO: 51.433 FOR CARCINOGENICITY OF FOODS.
SEE ALSO: 51.4614 FOR CARCINOGENICITY OF AMINO ACID ANALOGS AND FOR ROLE OF CHOLINE DEFICIENCY IN TUMOR INDUCTION BY ETHIONINE.
SEE ALSO: 51.4600535 FOR EFFECT OF CARCINOGENS ON VITAMINS.
SEE ALSO: 51.4322 FOR CARCINOGENICITY ASSOCIATED WITH ELEMENTS.
51.41121 GENERAL.
51.41122 EFFECT OF VITAMIN DEFICIENCIES OR EXCESSES ON TUMOR DEVELOPMENT.
51.411221 GENERAL.
51.411222 EFFECT OF VITAMIN A STATUS ON CARCINOGENESIS IN ANIMALS.
INDUCTION OF SQUAMOUS METAPLASIA OF RAT URINARY BLADDER BY AVITAMINOSIS A.
EFFECT OF VITAMIN A IN REDUCING TUMOR INDUCTION BY AROMATIC HYDROCARBONS (PYRIDOXINE).
51.411223 EFFECT OF B VITAMINS ON CARCINOGENESIS IN ANIMALS.
EFFECT OF CHOLINE AND B-VITAMIN DEFICIENCY.
DECREASED TUMOR INCIDENCE DUE TO DEFICIENCY OF VITAMIN B-6.
51.4113 ROLE OF HEREDITARY (GENETIC) FACTORS, SEX DIFFERENCE, AND SPECIES SPECIFICITY IN CANCER DEVELOPMENT IN ANIMALS.
SEE ALSO: 51.74 FOR GENETIC ASPECTS OF TUMOR IMMUNOLOGY.
SEE ALSO: 51.744 FOR GENETICS OF TUMOR TRANSPLANTATION.
SEE ALSO: 51.4543 FOR THE IMMUNOGENETICS OF TUMOR INDUCTION BY ONCOGENIC VIRUSES.
SEE ALSO: 51.86002 FOR GENETICS OF PLANT TUMORS.
51.41131 GENERAL.
51.41132 GENETIC FACTORS (GENOTYPIC CHANGES AND PHENOTYPES) ASSOCIATED WITH INCREASED INCIDENCE OF CANCER IN ANIMALS.
STRAINS OF MICE AND OTHER ANIMALS WITH A HIGH INCIDENCE OF SPONTANEOUS TUMORS.
COMPARISONS OF TUMOR INDUCTION IN DIFFERENT STRAINS.
TUMOR INCIDENCE IN C FAMILY OR HTF (HIGH TUMOR FAMILY) MICE, INCLUDING CBA AND C3H.
SEE ALSO: 51.8412 FOR GENETICS OF FISH MELANOMAS.
SEE ALSO: 51.412524 FOR STRAINS OF MICE WITH HIGH INCIDENCE OF LEUKEMIA AND LYMPHOMA.
SEE ALSO: 51.4764 FOR GENES DETERMINING THE INCIDENCE OF TESTICULAR TERATOMAS IN STRAIN 129 MICE.
SEE ALSO: 51.45124 FOR ROLE OF GENETICS IN THE VIRUS-INDUCTION OF CANCER AND TRANSPLANTATION OF VIRUS-INDUCED TUMORS AND SUSCEPTIBILITY GENES.

SEE ALSO: 51.4262 FOR CHANGES IN CHROMOSOMES DURING CARCINOGENESIS.

51.4114 EFFECT OF IMMUNE FACTORS AND IMMUNE STATUS OF THE HOST ON TUMOR DEVELOPMENT IN ANIMALS.
EFFECT OF THYMECTOMY AND THYMUS EXTRACTS OR THYMUS TRANSPLANTS ON TUMOR DEVELOPMENT.
SEE ALSO: 51.451252 FOR CANCER INDUCED BY VIRUS IN THYMECTOMIZED ANIMALS.
SEE ALSO: 51.460055 FOR ROLE OF IMMUNITY IN CHEMICAL CARCINOGENESIS.

51.4115 OTHER HOST INFLUENCES ON TUMOR DEVELOPMENT.
SEE ALSO: 51.424 FOR EXOGENOUS AGENTS (INCLUDING CO-CARCINOGENS) WHICH STIMULATE CANCER OCCURRENCE OR INDUCTION BY CARCINOGENIC AGENTS.
SEE ALSO: 51.47162 FOR EFFECT OF PREGNANCY AND SEX HORMONES ON TUMOR DEVELOPMENT.
SEE ALSO: 51.47 FOR EFFECT OF HORMONES, SEX DIFFERENCES, AND PREGNANCY ON TUMOR DEVELOPMENT.

51.411501 GENERAL.
51.411502 METHODS FOR STUDYING HOST INFLUENCES ON CARCINOGENESIS.
TRANSPLANTATION OF PRE-CANCEROUS OR CARCINOGEN-TREATED TISSUES INTO HOST MAMMARY GLAND FAT PADS.
SEE ALSO: 48.13 FOR SURGICAL TECHNIQUES OF TRANSPLANTATION INTO FAT PADS.
51.411504 EFFECT OF HOST AGE ON SUSCEPTIBILITY TO CARCINOGENESIS.
SEE ALSO: 51.4600513 FOR EFFECT OF AGE ON RESPONSE OF HOST TO CHEMICAL CARCINOGENESIS.
SPONTANEOUS TUMOR INCIDENCE AND TUMOR INDUCTION IN AGED RATS.
51.411505 TRANSPLACENTAL TUMOR INDUCTION AND EFFECT OF CARCINOGENIC INFLUENCES ON EMBRYOS DURING GESTATION.
51.411506 EFFECT OF PRIMIPAROUS AGE AND LITTER NUMBER.
51.411507 EFFECT OF SEX SEGREGATION AND OTHER ENVIRONMENTAL AND SOCIAL FACTORS (HOUSING MALES AND FEMALES IN SEPARATE CAGES) ON TUMOR INCIDENCE.
51.411508 MISCELLANEOUS HUMORAL AND TISSUE AND OTHER ENDOGENOUS FACTORS WHICH PROMOTE TUMOR GROWTH.

51.412 CARCINOGENESIS, ETIOLOGY, AND PREMALIGNANT PATHOLOGY OF CARDIOVASCULAR, LYMPHORETICULAR, AND RETICULOENDOTHELIAL TISSUES IN ANIMALS.
51.4122 ETIOLOGY OF CARDIAC CANCER IN ANIMALS.
51.4123 ETIOLOGY OF BLOOD VESSEL TUMORS (ANGIOMAS) IN ANIMALS.
51.4125 ETIOLOGY, CARCINOGENESIS, ZOOEPIDEMIOLOGY, AND PREMALIGNANT PATHOLOGY OF LEUKEMIA IN ANIMALS (EXCLUDING ALL VIRAL ETIOLOGY).
SEE ALSO: 51.45 FOR LEUKEMOGENIC VIRUSES AND VIRAL ETIOLOGY OF LEUKEMIA.

51.41251 GENERAL.
51.41252 RADIATION AS A FACTOR IN THE ETIOLOGY OF LEUKEMIA IN ANIMALS.
AGENTS THAT MODIFY LEUKEMIA INDUCTION BY IRRADIATION.
SEE ALSO: 51.4523803 FOR THE ROLE OF VIRUSES (RADIATION LEUKEMIA VIRUS) IN THE INDUCTION OF LEUKEMIA BY IRRADIATION.
51.41253 ROLE OF THE THYMUS, OTHER IMMUNE FACTORS, AND HOST IMMUNE STATUS IN LEUKEMOGENESIS IN ANIMALS.
ABILITY OF PROLONGED IMMUNE STIMULATION TO INDUCE CANCER.
SEE ALSO: 51.4114 FOR MORE GENERAL ASPECTS OF THE INFLUENCE OF IMMUNE FACTORS ON CARCINOGENESIS.
SEE ALSO: 51.45 FOR ROLE OF IMMUNE FACTORS IN VIRAL INDUCTION OF CANCER.
SEE ALSO: 51.4512224 FOR THYMUS LEUKEMIA AND THE TL ANTIGEN.
51.41254 ROLE OF GENETIC INFLUENCES ON THE DEVELOPMENT OF LEUKEMIA IN ANIMALS.
STRAINS OF MICE WITH HIGH OR LOW INCIDENCE OF LEUKEMIA.
GENETICS OF LEUKOSIS IN CATTLE.
51.41255 OTHER ENDOGENOUS FACTORS AFFECTING THE OCCURRENCE AND INDUCTION OF LEUKEMIA IN ANIMALS.
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51.41839 OTHER ASPECTS OF SKIN CANCER ETIOLOGY AND CARCINOGENESIS IN ANIMALS.
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51.41923 ETIOLOGY OF PHARYNGEAL CANCER IN ANIMALS.
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THYMUS CELLS AND EXTRACTS FROM NEONATAL MICE STIMULATE DMBA-INDUCED LUNG CARCINOGENESIS.
51.424404 PROMINE.
SEE ALSO: 43.355181 FOR MORE GENERAL INFORMATION ABOUT PROMINE.
51.4245 CO-CARCINOGENIC ACTIVITY OF OTHER CHEMICAL AGENTS.
51.4245A11 GENERAL.
51.4245D11 DMSO.
51.4245E11 ETHANOL.
51.4245E12 EPHEDRINE.
51.4245H11 COCARCINOGENIC ACTIVITY OF DODECANE (IN DECALIN) AND OTHER ALIPHATIC HYDROCARBONS.
51.4245P11 PIPERONYL BUTOXIDE AND PIPERONYL SULFOXIDE.
51.4245P12 PHENOLS.
51.4245R11 RESERPINE.
51.4249 CO-CARCINOGENIC ACTIVITY OF OTHER AGENTS NOT INCLUDED ABOVE.

NOTE: THE FOLLOWING CLASS IS LIMITED TO THE EFFECT OF CARCINOGENS ON THE BIOCHEMISTRY AND METABOLISM OF CELLS AND CHANGES IN LEVEL OR METABOLISM OF VARIOUS COMPOUNDS DURING CARCINOGENESIS.

51.425 METABOLIC AND OTHER BIOCHEMICAL CHANGES DURING NON-VIRAL CARCINOGENESIS AND MALIGNANT TRANSFORMATION.
MOLECULAR GENETICS OF CARCINOGENESIS.
SEE ALSO: 51.6 FOR ALL OTHER ASPECTS OF CANCER BIOCHEMISTRY.
51.4250 GENERAL.
51.42501 THEORIES OF NON-VIRAL CARCINOGENESIS AND MALIGNANT TRANSFORMATION BASED ON BIOCHEMICAL AND MOLECULAR GENETIC PHENOMENA.
51.4251 CHANGES IN NUCLEIC ACIDS AND NUCLEIC ACID METABOLISM DURING CARCINOGENESIS.
EFFECT OF CARCINOGENS ON NUCLEIC ACIDS AND NUCLEIC ACID METABOLISM.
TRANSFORMATION INDUCED BY DNA OR TUMOR EXTRACTS.
SEE ALSO: 51.45 FOR TUMOR INDUCTION BY CELL-FREE EXTRACTS IF VIRUSES ARE INVOLVED.
51.4252 CHANGES IN AMINO ACIDS AND PROTEINS AND THE BIOSYNTHESIS AND METABOLISM OF AMINO ACIDS AND PROTEINS DURING CARCINOGENESIS.
51.42521 GENERAL.
51.42522 CHANGES IN AMINO ACIDS (GENERAL) AND THEIR METABOLITES.
(ADD 3 LETTER CODE FOR SPECIFIC AMINO ACIDS).
51.42522CYS CHANGES IN CYSTINE, CYSTEINE, AND OTHER SH COMPOUNDS AND THEIR METABOLISM DURING CARCINOGENESIS.
51.42523 CHANGES IN PROTEIN BIOSYNTHESIS AND COMPONENTS OF THE PROTEIN-SYNTHESIZING SYSTEM DURING CARCINOGENESIS.
51.425231 GENERAL.
51.425232 CHANGES IN T-RNA DURING CARCINOGENESIS.
51.425233 CHANGES IN RIBOSOMES DURING CARCINOGENESIS.
51.425234 CHANGES IN M-RNA DURING CARCINOGENESIS.
51.425235 CHANGES IN PROTEIN SYNTHESIZING ENZYMES DURING CARCINOGENESIS.
51.4253 CHANGES IN LIPIDS AND LIPID METABOLISM DURING CARCINOGENESIS.
51.4254 CHANGES IN CARBOHYDRATES AND POLYSACCHARRIDES AND THEIR METABOLISM DURING CARCINOGENESIS.
51.4255 CHANGES IN VITAMINS AND THEIR METABOLISM DURING CARCINOGENESIS.
51.4256 CHANGES IN ENZYMES DURING CARCINOGENESIS.
SEE ALSO: 51.46 FOR ENZYME DELETION DURING CARCINOGENESIS.
51.4257 CHANGES IN ENERGY METABOLISM AND COENZYMES DURING CARCINOGENESIS OR MALIGNANT TRANSFORMATION.
51.4259 OTHER CHANGES IN BIOCHEMISTRY AND METABOLISM DURING CARCINOGENESIS OR MALIGNANT TRANSFORMATION.
51.426 ALTERATIONS IN CELL MORPHOLOGY AND CYTOLOGY DURING CARCINOGENESIS.

51.4261 GENERAL.
51.4262 CHANGES IN THE NUCLEUS AND CHROMOSOMES DURING CARCINOGENESIS.
CHANGES IN APPEARANCE, NUMBER, AND TYPE OF CHROMOSOMES DURING CARCINOGENESIS.
51.4263 CHANGES IN MITOCHONDRIA DURING CARCINOGENESIS.
51.4264 CHANGES IN MICROSOMES DURING CARCINOGENESIS.
51.4265 CHANGES IN LYSOSOMES DURING CARCINOGENESIS.
51.4266 CHANGES IN CELL MEMBRANES DURING CARCINOGENESIS.
51.4269 CHANGES IN OTHER ASPECTS OF CELL MORPHOLOGY AND CYTOLOGY DURING CARCINOGENESIS.

51.43 CARCINOGENIC EFFECT OF EXOGENOUS ENVIRONMENTAL AGENTS NOT INCLUDED IN RADIATION CARCINOGENESIS (51.44), VIRAL CARCINOGENESIS (51.45), CHEMICAL CARCINOGENESIS (51.46), OR HORMONAL CARCINOGENESIS (51.47).
SEE ALSO: 51.458 FOR EFFECT OF NON-VIRAL MICROBES ON CANCER INCIDENCE AND DEVELOPMENT (CANCER IN GERM FREE ANIMALS).
SEE ALSO: 51.4006 FOR EPIDEMIOLOGY OF CANCER IN SPECIFIC GEOGRAPHIC AREAS.
SEE ALSO: 51.424 FOR COCARCINOGENS AND FOR COCARCINOGENIC EFFECT OF ENVIRONMENTAL AGENTS.
51.431 GENERAL.
SEE ALSO: 51.46004 FOR METHODS FOR DETECTING CARCINOGENS IN THE ENVIRONMENT AND ELSEWHERE.
51.4311 GENERAL ARTICLES AND BOOK REVIEWS.
51.4313 PREVENTION OF CANCER INDUCTION BY ENVIRONMENTAL AGENTS.
51.432 INDUSTRIAL CARCINOGENS, OCCUPATIONAL CARCINOGENESIS, AND CARCINOGENICITY OF ELEMENTS AND MINERALS.
SEE ALSO: 51.460 FOR ORGANIC CARCINOGENS.
SEE ALSO: 51.435 FOR INDUSTRIAL CARCINOGENS IN AIR, WATER, AND SOIL.
51.4321 GENERAL.
51.43211 OPEN.
51.43212 EPIDEMIOLOGIC STUDIES OF CANCER OCCURRENCE IN VARIOUS OCCUPATIONS, INDUSTRIAL ENVIRONMENTS, OR IN RELATION TO SPECIFIC CHEMICAL INDUSTRIES.
51.4322 CARCINOGENIC ACTIVITY OF ELEMENTS, METAL COMPLEXES, AND INORGANIC COMPOUNDS.
SEE ALSO: 51.4323 FOR CARCINOGENICITY OF VARIOUS MINERALS.
SEE ALSO: 51.46 FOR CARCINOGENIC ORGANIC CHEMICALS.
SEE ALSO: 51.444 FOR CARCINOGENIC ACTIVITY OF RADIOACTIVE ISOTOPES AND ELEMENTS (INCLUDING URANIUM).
51.4322AA GENERAL.
51.4322AA1 RELATION OF TRACE ELEMENTS IN GENERAL TO CARCINOGENESIS.
51.4322AL ALUMINUM AND ALUMINUM FOIL AS CARCINOGENIC AGENTS.
51.4322AS ARSENIC AND ITS INORGANIC DERIVATIVES AS CARCINOGENIC AGENTS.
POSSIBLE CARCINOGENIC HAZARD OF ARSENIC RESIDUES IN FOODS.
51.4322BE BERYLLIUM AND ITS INORGANIC DERIVATIVES AS CARCINOGENIC AGENTS.
51.4322CA CALCIUM AND ITS INORGANIC DERIVATIVES AS CARCINOGENIC AGENTS.
51.4322CD CADMIUM AND ITS INORGANIC DERIVATIVES AS CARCINOGENIC AGENTS.
PRODUCTION OF TESTICULAR TUMORS BY CADMIUM COMPOUNDS.
51.4322CO COBALT AND ITS INORGANIC DERIVATIVES AS CARCINOGENIC AGENTS.
51.4322CR CHROMIUM AND ITS INORGANIC DERIVATIVES AS CARCINOGENIC AGENTS (INCLUDING CHROMATES).
LUNG CANCER INDUCTION BY CHROMATES.
51.4322FE IRON AND ITS INORGANIC DERIVATIVES AS CARCINOGENIC AGENTS.
SEE ALSO: 51.436101 FOR CARCINOGENICITY OF IRON COMPLEXES AND IRON-CONTAINING DRUGS USED TO TREAT IRON DEFICIENCY ANEMIA.
51.4322NI NICKEL AND ITS INORGANIC DERIVATIVES AS CARCINOGENIC AGENTS (INCLUDING NICKEL CARBONYL).
LUNG CANCER INDUCTION BY NICKEL CARBONYL.
RHABDOMYOSARCOMA INDUCTION BY INJECTING NICKEL COMPOUNDS.
51.4322PB LEAD AND ITS INORGANIC DERIVATIVES AS CARCINOGENIC AGENTS.
HYPERPLASIA AND POSSIBLE NEOPLASIA INDUCED BY FEEDING LEAD.
51.4322SE SELENIUM AND ITS INORGANIC DERIVATIVES AS CARCINOGENIC AGENTS.
LIVER TUMOR INDUCTION BY POTASSIUM AMMONIUM SELENIDE.
51.4322ZN ZINC AND ITS INORGANIC DERIVATIVES AS CARCINOGENIC AGENTS.
TESTICULAR TUMOR INDUCTION BY INJECTION OF ZINC SALTS.
51.4323 CARCINOGENESIS ASSOCIATED WITH MINING AND MINERAL PROCESSING INDUSTRIES (AND RELATED DUSTS AND GASES).
SEE ALSO: 51.4322 FOR CARCINOGENIC ACTIVITY OF ELEMENTS, METAL COMPLEXES, AND INORGANIC COMPOUNDS.
SEE ALSO: 51.4352 FOR CARCINOGENICITY OF AIR POLLUTANTS (INCL. SULFUR DIOXIDE).

51.432301 GENERAL.
51.4323011 CANCER INCIDENCE IN MINERS AND WORKERS IN MINERAL PROCESSING INDUSTRIES.
51.432302 CARCINOGENICITY OF ASBESTOS.
51.432303 CARCINOGENICITY OF MINE DUSTS (GENERAL).
THEIR ROLE IN CAUSING LUNG CANCER IN MINERS.
51.432304 CARCINOGENICITY OF TALC (TALC GRANULOMAS).
51.432305 CARCINOGENESIS RELATED TO URANIUM MINING AND URANIUM MINERS.
SEE ALSO: 51.444U- FOR CARCINOGENIC ACTIVITY OF URANIUM IN ANIMALS.
51.4324 CARCINOGENESIS RELATED TO INDUSTRIES WHICH MANUFACTURE OR USE ORGANIC CHEMICALS.
SEE ALSO: 51.43212 FOR GENERAL EPIDEMIOLOGICAL STUDIES.
SEE ALSO: 51.46 FOR SPECIFIC CLASSES OF CARCINOGENIC CHEMICALS AND INDIVIDUAL COMPOUNDS.
51.432401 GENERAL.
51.4324011 REVIEWS.
51.4324012 REGULATION OF MANUFACTURING, IMPORTATION AND USE OF CARCINOGENIC CHEMICALS IN DIFFERENT COUNTRIES.
51.432402 CANCER INCIDENCE IN THE COAL TAR INDUSTRIES AND WORKERS USING COAL TAR FRACTIONS.
51.432403 CANCER INCIDENCE AND ETIOLOGY RELATED TO THE PRODUCTION OR USE OF MINERAL OIL AND OTHER PETROLEUM OILS AND WAXES.
SEE ALSO: 51.41252701 FOR INDUCTION OF PLASMA CELL TUMORS WITH MINERAL OIL.
51.43240301 GENERAL.
51.43240302 CANCER RELATED TO THE USE OF "BATCHING" OIL IN JUTE PROCESSING.
51.432404 CANCER INCIDENCE (PARANASAL SINUS TUMORS) RELATED TO ISOPROPANOL MANUFACTURE.
51.4325 CANCER INCIDENCE IN EMPLOYEES OF INORGANIC CHEMICAL INDUSTRIES.
SEE ALSO: 51.4323011 FOR CANCER INCIDENCE IN MINERS AND WORKERS IN MINERAL PROCESSING INDUSTRIES.
51.432501 GENERAL.
51.432502 CANCER IN STEELWORKERS.
51.433 CARCINOGENICITY AND COCARCINOGENICITY OF FOODS, FOOD ADDITIVES, BEVERAGES, AND EXTRANEOUS SUBSTANCES PRESENT IN FOODS.
SEE ALSO: 51.436 FOR CARCINOGENICITY OF DRUGS AND MEDICINES.
SEE ALSO: 55.1406 FOR GENERAL TOXICITY OF FOODS.
SEE ALSO: 51.86 FOR UPTAKE AND FATE OF CARCINOGENS BY PLANTS.
51.4331 GENERAL.
REVIEWS AND BROAD GENERAL ARTICLES.
51.4332 CARCINOGENS IN FUNGI-CONTAMINATED OR FERMENTED FOODS AND CARCINOGENICITY OF MYCOTOXINS (MOLDY PEANUT MEAL).
SEE ALSO: 55.1405 AND 55.1406 FOR TOXICITY OF FERMENTED FOODS IN GENERAL.
SEE ALSO: 51.458901 FOR FUNGAL INFECTION AS A POSSIBLE SOURCE OF CANCER.
SEE ALSO: 51.4334A12 FOR CARCINOGENIC SUBSTANCES IN CERTAIN FERMENTED BEVERAGES (WHISKEY).
51.4332A11 GENERAL.
51.4332A12 ISOLATION, STRUCTURE, PROPERTIES, AND CARCINOGENICITY OF AFLATOXINS.
ITS ROLE IN "TURKEY X DISEASE" AND FISH HEPATOMAS.
51.4332E11 ERGOT.
51.4333 OPEN.
51.4334 CARCINOGENIC ACTIVITY OF SPECIFIC FOODS, FOOD COMPONENTS, AND BEVERAGES.
51.4334A11 GENERAL.
51.4334A12 CARCINOGENIC SUBSTANCES IN ALCOHOLIC (FERMENTED) BEVERAGES (WHISKEY).
ASSOCIATION OF CANCER WITH HEAVY DRINKING.
51.4334C11 CYCADS AND CARCINOGENIC ACTIVITY OF CYCASIN AND ITS AGLYCONE (METHYL AZOXYMETHANOL).
SEE ALSO: 55.14052 FOR MORE GENERAL TOXICITY OF CYCASIN.
51.4334F11 CARCINOGENIC ACTIVITY OF FATS, OILS, FATTY ACIDS, AND OTHER LIPIDS AND RELATED SUBSTANCES.
SEE ALSO: 51.4334S14 FOR CARCINOGENICITY OF STEROIDS.
51.4334F111 CARCINOGENICITY OF OXIDIZED OR UNSATURATED FATTY ACIDS.
51.4334F112 CARCINOGENICITY OF IRRADIATED LIPIDS AND FATTY ACIDS.
51.4334N11 SODIUM NITRITE.
51.4334S11 CARCINOGENS IN AND POTENTIAL CARCINOGENIC HAZARDS OF SMOKED AND CHARCOAL-BROILED FOODS.
51.4334S12 SAFFROLE (PARA-ALLYL METHYLENE DIOXYBENZENE).
51.4334S13 SESAME OIL (SESAMOL).

51.4334S14 STEROIDS IN FOODS.
POSSIBLE CONVERSION OF STEROIDS TO AROMATIC HYDROCARBON CARCINOGENS.
CARCINOGENIC SUBSTANCES IN THE STEROID FRACTION OF HEN EGGS.
CARCINOGENICITY OF OTHER ANIMAL STEROIDS (LITHOCHOLIC ACID AND OTHER BILE ACIDS).
51.4334T11 COFFEE AND OTHER BREWS (SUCH AS TEAS FROM SOME AFRICAN BUSHES).
CARCINOGENICITY OF PHENOLS FROM THESE TEAS.
SEE ALSO: 51.436H11 FOR HERBAL REMEDIES AND FOLK MEDICINES.
51.4334T12 CARCINOGENIC ACTIVITY OF TANNIC ACID.
51.4334Z11 DEVELOPMENT OF HEPATOMA IN TROUT FED DRIED FISH MEAL AND DRIED COTTONSEED MEAL.
51.4335 CARCINOGENIC, POTENTIALLY CARCINOGENIC, OR CO-CARCINOGENIC ACTIVITY OF FOOD ADDITIVES.
SEE ALSO: 51.4322SE FOR CARCINOGENICITY OF SELENIUM COMPOUNDS (SOMETIMES USED IN ANIMAL FEEDS).
SEE ALSO: 51.4322AS FOR CARCINOGENICITY OF ARSENIC COMPOUNDS (SOMETIMES USED IN ANIMAL FEEDS).
SEE ALSO: 51.4354 FOR CARCINOGENESIS RELATED TO CHEMICAL RESIDUES UNINTENTIONALLY PRESENT IN FOODS.
51.4335TW11 TWEEN 60 (POLYOXYETHYLENE SORBITAN STEARATE).
51.4335CY11 CYCLAMATES.
51.4335SA11 SACCHARIN.
51.434 CARCINOGENIC AGENTS ASSOCIATED WITH CUSTOMS AND HABITS.
SEE ALSO: 51.4004 FOR EPIDEMIOLOGICAL STUDIES OF ETHNIC, RACIAL, RELIGIOUS, AND SOCIAL GROUPS.
51.4341 GENERAL.
51.4342 CARCINOGENIC AND CO-CARCINOGENIC ACTION OF CIGARETTES, TOBACCO SMOKE, UNCOMBUSTED TOBACCO, AND OTHER TOBACCO-RELATED PRODUCTS.
SEE ALSO: 51.41434 FOR RELATION OF CIGARETTE SMOKE TO BLADDER CANCER IN ANIMALS.
SEE ALSO: 51.4052 FOR OTHER EPIDEMIOLOGICAL STUDIES ON LUNG CANCER.
51.43421 GENERAL.
51.43422 ISOLATION AND IDENTIFICATION OF CARCINOGENIC FRACTIONS (TARS) AND OTHER COMPOUNDS AND SUBSTANCES IN CIGARETTE AND TOBACCO SMOKE.
51.4342205 CARCINOGENIC ACTIVITY AND ROLE OF PO-210 POLONIUM (PO) IN CIGARETTE SMOKE.
51.43423 EXPERIMENTAL STUDIES OF CIGARETTE AND TOBACCO SMOKE AND RELATED SUBSTANCES IN ANIMALS.
51.4342311 GENERAL.
SEE ALSO: 51.4342352 FOR INDUCTION OF LUNG TUMORS AND OTHER RESPIRATORY TRACT AND PULMONARY SYSTEM TUMORS BY TOBACCO SMOKE AND RELATED PRODUCTS IN ANIMALS.
SEE ALSO: 51.4342383 FOR INDUCTION OF SKIN TUMORS BY TOBACCO TAR AND OTHER TOBACCO-RELATED PRODUCTS.
51.43424 CARCINOGENICITY OF CIGARETTE AND TOBACCO SMOKE AND RELATED SUBSTANCES IN HUMANS.
51.434241 GENERAL.
51.434242 EPIDEMIOLOGICAL SURVEYS AND OTHER STUDIES RELATING CANCER TO SMOKING HABITS IN MEN AND WOMEN.
51.43424243 CORRELATION OF SMOKING WITH BLADDER CANCER.
51.43424252 CORRELATION OF SMOKING WITH LUNG CANCER.
51.43424254 CORRELATION OF SMOKING WITH GASTRIC CANCER.
51.4342429 RELATION OF SMOKING TO OTHER TYPES OF CANCER.
51.43425 METHODS FOR PREVENTING OR REDUCING CANCER INDUCTION BY TOBACCO SMOKE.
51.434251 GENERAL.
51.434252 WAYS TO REDUCE SMOKING.
51.4342521 GENERAL.
51.4342522 ANTI-SMOKING CAMPAIGNS.
51.4342523 DRUGS USED TO REDUCE SMOKING.
51.434253 WAYS TO REDUCE CARCINOGENICITY OF TOBACCO SMOKE.
51.4342531 GENERAL.
51.4342532 ADDITIVES WHICH REDUCE TOBACCO SMOKE CARCINOGENICITY (SODIUM NITRATE).
51.43426 OPEN.
51.43427 CARCINOGENICITY OF UNCOMBUSTED TOBACCO (SNUFF AND CHEWING TOBACCO).
51.435 CARCINOGENICITY OF ENVIRONMENTAL POLLUANTS.
51.4351 GENERAL.
51.4352 ATMOSPHERIC CARCINOGENS.
SULFUR DIOXIDE.
CARCINOGENIC ACTIVITY OF AIR POLLUTANTS.

SEE ALSO: 50.82 FOR AIR POLLUTION (GENERAL).
51.43521 GENERAL; METHODS FOR SAMPLING AND ISOLATING ATMOSPHERIC CARCINOGENS.
51.43522 ATMOSPHERIC CARCINOGENS RELATED TO PETROLEUM AND AROMATIC HYDROCARBONS.
CARCINOGENS IN AIR NEAR PETROCHEMICAL INDUSTRIES.
51.43523 CORRELATION OF CANCER INCIDENCE WITH AIR POLLUTION.
51.43524 CARCINOGENS IN MOTOR EXHAUSTS.
51.43525 CARCINOGENICITY OR CO-CARCINOGENICITY OF SPECIFIC AGENTS IN POLLUTED AIR.
51.4352501 SULFUR DIOXIDE.
51.4353 CARCINOGENIC COMPOUNDS IN POLLUTED WATER.
51.4354 CARCINOGENESIS RELATED TO PESTICIDES, INSECTICIDES, HERBICIDES OR WEED KILLERS, GROWTH STIMULATORS, AND OTHER CHEMICAL AGENTS AND RESIDUES IN THE ENVIRONMENT.
SEE ALSO: 51.4322SE FOR CARCINOGENICITY OF SELENIUM COMPOUNDS (SOMETIMES USED IN ANIMAL FEEDS).
SEE ALSO: 51.4322AS FOR CARCINOGENICITY OF ARSENIC COMPOUNDS (SOMETIMES USED IN ANIMAL FEEDS).
SEE ALSO: 51.4335 FOR CARCINOGENICITY OF FOOD ADDITIVES.
51.4354ALD ALDRIN.
51.4354ARA ARAMITE.
51.4354DDT DDT.
51.4354DIE DIELDRIN.
51.435401 GENERAL.
51.435402 CARCINOGENIC HAZARD OF HORMONE RESIDUES IN ANIMAL FOODS.
51.436 CARCINOGENICITY OF DRUGS AND CLOSELY RELATED COMPOUNDS, DERIVATIVES, OR METABOLITES.
SEE ALSO: 51.402525 FOR INDUCTION OF LYMPHOMAS BY ANTICONVULSANTS.
SEE ALSO: 51.47162 FOR POSSIBLE CARCINOGENIC ACTIVITY OF PROGESLUTINAL AND ANTIFERTILITY AGENTS.
51.436G11 GRISEOFULVIN.
51.436H11 HERBAL REMEDIES AND FOLK MEDICINES AND THEIR COMPONENTS.
PYRROLIZIDINE ALKALOIDS (HEPATIC CARCINOGENS) IN HERBAL REMEDIES.
SEE ALSO: 51.4334T11 FOR OTHER TEAS AND BREWS.
51.436I11 IRON COMPLEXES (SOMETIMES INDUCE FIBROMAS).
IMFERON (IRON DEXTRAN COMPLEX).
MUSCULARON.
51.436I12 ISONIAZID (RELATED TO LUNG TUMORS IN SOME ANIMALS).
51.436N11 NITROFURANS.
51.436S11 SALICYLATES.
51.437 CARCINOGENICITY OF MISCELLANEOUS PLANT AND ANIMAL PRODUCTS NOT INCLUDED IN PREVIOUS CATEGORIES.
SEE ALSO: 51.4334 FOR CARCINOGENICITY OF FOODS AND BEVERAGES AND RELATED AGENTS.
51.4371 CARCINOGENICITY OF MISCELLANEOUS PLANTS AND PLANT SUBSTANCES, AND MICROBIAL SUBSTANCES.
51.437101 CARCINOGENICITY OF THE BRACKEN FERN (PTERIS AQUILINA).
51.4372 CARCINOGENICITY OF MISCELLANEOUS SUBSTANCES, COMPOUNDS AND AGENTS FROM ANIMALS.
51.4373 CARCINOGENICITY OF MICROBIAL SUBSTANCES.
SEE ALSO: 51.436 FOR CARCINOGENICITY OF ANTIBIOTICS.
51.439 CARCINOGENESIS RELATED TO OTHER ENVIRONMENTAL AGENTS AND INFLUENCES.
SEE ALSO: 51.4242 FOR EFFECT OF TRAUMA, AND ENVIRONMENTAL AND PSYCHOLOGICAL STRESS.

51.44 CARCINOGENIC ACTION OF RADIATION AND OTHER ASPECTS OF RADIATION CARCINOGENESIS.
SEE ALSO: 51.45238 FOR SYNERGISTIC CARCINOGENIC ACTIVITY OF VIRUSES PLUS RADIATION AND FOR POSSIBLE ROLE OF VIRUSES IN RADIATION CARCINOGENESIS.
51.440 RADIATION-INDUCED TUMORS OF SPECIFIC TISSUES.
SEE ALSO: 51.41252 FOR PRODUCTION OF LEUKEMIA BY IRRADIATION IN ANIMALS.
SEE ALSO: 51.41262 FOR PRODUCTION OF LYMPHOMA BY IRRADIATION IN ANIMALS.
51.4405524 MAMMARY GLAND CANCER INDUCTION BY IRRADIATION.
51.440563 THYROID CANCER INDUCTION BY IRRADIATION.
51.440832 SKIN CANCER INDUCTION BY IRRADIATION.
SEE ALSO: 51.443 FOR ALL ASPECTS OF SKIN CARCINOGENESIS BY ULTRAVIOLET IRRADIATION.
51.441 GENERAL INFORMATION.
51.4411 OPEN.
51.4412 GENERAL EPIDEMIOLOGICAL ASPECTS OF RADIATION CARCINOGENESIS IN HUMANS.
51.4413 AGENTS AND FACTORS THAT PROTECT AGAINST RADIATION-INDUCED CARCINOGENESIS; THE RADIATION LEUKEMIA PROTECTION FACTOR.
ANTI-RADIATION FACTOR IN BONE MARROW.

51.442 CARCINOGENIC ACTIVITY OF X-RAY.
51.4421 GENERAL.
MALIGNANT OR PREMALIGNANT CYTOLOGICAL CHANGES AFTER IRRADIATION AND EFFECT ON CHROMOSOMES.
51.4422 IN HUMANS.
51.4422 CARCINOGENIC EFFECT OF DIAGNOSTIC RADIATION OR RADIATION THERAPY.
INCREASED THYROID CANCER IN CHILDREN AFTER X-RAY FOR THYMUS ENLARGEMENT.
NEUROFIBROMATA INDUCED BY CERVICAL IRRADIATION.
SEE ALSO: 51.40252 FOR X-RAY AS A FACTOR IN PRODUCING LEUKEMIA IN HUMANS.
51.4423 IN EXPERIMENTAL ANIMALS.
51.443 CARCINOGENIC EFFECT OF ULTRAVIOLET LIGHT.
INDUCTION OF MELANOMA BY ULTRAVIOLET RADIATION OF BENIGN NEVI.
51.444 CARCINOGENIC ACTIVITY OF RADIOACTIVE ELEMENTS.
51.444AA GENERAL.
51.444AA1 CARCINOGENIC AND POSSIBLE CARCINOGENIC EFFECTS OF RADIOACTIVE CONTAMINATION IN THE ENVIRONMENT.
51.444CO COBALT-60.
51.444PO POLONIUM-210.
SEE ALSO: 51.4342205 FOR PO-210 IN CIGARETTE SMOKE.
51.444RU RUTHENIUM-160.
51.444SR STRONTIUM-90.
51.444TH THALLIUM-204.
51.444U- URANIUM.
SEE ALSO: 51.432305 FOR CANCER AMONG URANIUM MINERS.
51.4444I- IODINE-131.
POSSIBLE CARCINOGENIC EFFECTS OF I-131 THERAPY.
51.4446P- P-32; INDUCTION OF LEUKEMIA BY THIS AGENT.
SEE ALSO: 51.4523803 FOR ROLE OF VIRUSES IN LEUKEMIA INDUCTION BY THIS AGENT.
51.4446RA RADIUM; THE RADIUM DIAL PAINTERS.
51.445 CARCINOGENIC EFFECT OF OTHER TYPES OF RADIATION AND HIGH ENERGY PARTICLES.
51.4451 GENERAL.
51.4452 CARCINOGENICITY OF ALPHA RADIATION.
51.4453 CARCINOGENICITY OF BETA RADIATION.
51.4454 CARCINOGENICITY OF RADIATION FROM PARTICLE ACCELERATORS.

51.45 VIRAL CARCINOGENESIS AND CARCINOGENESIS ASSOCIATED WITH OTHER LIVING PATHOGENS.
SEE ALSO: 51.40162 FOR GENERAL EPIDEMIOLOGICAL STUDIES RELATED TO VIRAL CAUSATION OF CANCER (GENERAL ASPECTS).
SEE ALSO: 62.2 FOR VIROLOGY IN GENERAL.
SEE ALSO: 62.233 FOR METHODS USED TO STUDY INFECTED CELLS (ELECTRON MICROSCOPY, IMMUNOLOGICAL METHODS, FLUORESCENT ANTIBODIES, ETC.).

NOTE: 51.45A TO 51.45Z ARE USED FOR INFORMATION ABOUT CANCER VIRUSES ASSOCIATED WITH SPECIFIC ANIMALS AND ARE ARRANGED MORE-OR-LESS ALPHABETICALLY BY MAJOR EXPERIMENTAL ANIMAL.

SELECTED RNA VIRUSES AND GENERAL ASPECTS OF RNA VIRUSES ARE IN 51.452.

SELECTED DNA VIRUSES AND GENERAL ASPECTS OF DNA VIRUSES ARE IN 51.453.

CERTAIN MISCELLANEOUS AND UNCLASSIFIED VIRUSES ARE IN 51.454.

TO REDUCE THE NUMBER OF DIGITS, THE MOST IMPORTANT ANIMALS HAVE DIGITS 1 TO 6, LESS IMPORTANT HAVE 71 TO 89, AND LEAST IMPORTANT HAVE 901 TO 999 AFTER THE LETTER. THE ASSIGNMENT OF A VARIABLE NUMBER OF DIGITS IS USED ELSEWHERE (NUMBERS FOR SPECIFIC VIRUSES).

FOR EACH TYPE OF ANIMAL, SUBDIVISION 2 DEALS WITH LEUKEMIA/LYMPHOMA VIRUSES AND SUBDIVISION 3 DEALS WITH SARCOMA VIRUSES (AND SOMETIMES FIBROMA VIRUSES). OTHER TYPES OF VIRUSES ARE ASSIGNED TO OTHER DIVISIONS. IN SOME CASES, (SEE 51.45A1E1, FOR EXAMPLE), LETTERS FOR SPECIFIC VIRUSES ARE ADDED IMMEDIATELY AFTER THE DIGITS AND LETTERS THAT IDENTIFY THE ANIMAL.

51.45A1 AVIAN CANCER VIRUSES AND RELATED INFORMATION.
51.45A1E1 AVIAN ERYTHROBLASTOSIS OR AVIAN ERYTHROLEUCOSIS VIRUS.
51.45A1E2 ES4 STRAIN OF AVIAN TUMOR VIRUS.
51.45A1J1 JM AND JM-V VIRUS.
51.45A1M1 MAREK'S DISEASE VIRUS AND AVIAN NEUROLYMPHOMATOSIS OR AVIAN HEPATOLYMPHOMATOSIS (FOWL PARALYSIS; RANGE PARALYSIS; NERVOUS FORMS OF LYMPHOID LEUKOSIS) AND LYMPHOID TUMORS INVOLVING THE OVARY AND NERVES.
51.45A1O1 AVIAN OSTEOPETROSIS (THICK LEG DISEASE; MARBLE BONE; DIFFUSE OSTEOPERIOSITIS) AFTER INNOCULATION OF LYMPHOID/LEUKOSIS VIRUSES.
51.45A1T1 T VIRUS RETICULOSIS (TVR).
AVIAN RETICULOENDOTHELIOSIS (CAUSED BY TWIEHAUS AGENT OR RE AGENT).
51.45A11 GENERAL.
51.45A112 IMMUNOLOGICAL TESTS AND IMMUNOLOGY OF AVIAN LEUKOSIS VIRUS IN GENERAL FOR INFECTION BY AVIAN LEUKOSIS VIRUSES; THE RESISTANCE-INDUCING FACTOR TEST (RIF TEST) AND THE COMPLEMENT FIXATION TEST FOR AVIAN LEUKOSIS VIRUSES (COFAL TEST).
51.45A113 EFFECT OF SPECIFIC GENES ON GROWTH OF AVIAN LEUKOSIS COMPLEX VIRUSES; CYTOLOGY AND PATHOLOGY OF THE DISEASE.
51.45A12 AVIAN LEUKOSIS, LYMPHOMATOSIS, MYELOBLASTOSIS AND MYELOCYTOMOSIS VIRUSES, OTHER FOWL LYMPHOMATOSIS AND FOWL LEUKOSIS VIRUSES, AND THE DISEASES THEY CAUSE.
AVIAN LEUKOSIS COMPLEX (ALC VIRUSES).
51.45A12B1 BAI-A STRAIN OF AVIAN TUMOR VIRUS.
51.45A12H1 HARVEY SARCOMA VIRUS.
VISCERAL LEUCOSIS VIRUS.
51.45A12L1 AVIAN LEUKOSIS VIRUSES (ALV), GENERAL.
51.45A12L2 AVIAN LYMPHOMATOSIS VIRUSES, GENERAL.
POSSIBILITY THAT LYMPHOMATOSIS IS A GENERAL REACTION TO MANY DIFFERENT AVIAN TUMOR VIRUSES.
51.45A12M1 AVIAN MYELOBLASTOSIS VIRUSES (AMV), GENERAL.
SEE ALSO BAI-A STRAIN.
51.45A12M2 AVIAN MYELOCYTOMATOSIS VIRUSES.
SEE ALSO MC-29 AND MC-31 STRAIN.
51.45A12M3 MC-29 STRAIN OF AVIAN TUMOR VIRUS.
51.45A12M4 MC-31 STRAIN OF AVIAN TUMOR VIRUS.
RPL-12 STRAIN LYMPHOID LEUKOSIS.
51.45A12R3 R VIRUS.
51.45A13 AVIAN SARCOMA AND FIBROMA VIRUSES AND RELATED DISEASES.
SEE ALSO: 51.A11R1 FOR ROUS SARCOMA VIRUSES.
51.45A13B1 B77 SARCOMA VIRUS.
51.45A13C1 COTURNIX (QUAIL) SARCOMA VIRUS.
51.45A13C2 CLAUDE'S AGENT.
51.45A13F1 FUJINAMI SARCOMA VIRUS.
51.45A13M1 MH2 OR MURRAY-BEGG ENDOTHELIOMA.
51.45A13M2 MURPHY AGENTS (K1, K7, K10, AND F3).
51.45A13R1 ROUS SARCOMA VIRUS (RSV, CHICKEN TUMOR NO. 1) AND RELATED LATENT CHICK VIRUSES.
RIF (RESISTANCE-INDUCING FACTOR) AND RAV (ROUS-ASSOCIATED VIRUS OR "HELPER" VIRUS).
SCHMIDT-RUPPIN, BRYAN, CARR-ZILBER, HARRIS AND PRAGUE STRAINS.
ANTIBODIES AGAINST RSV IN AVIAN SERA AND IN HUMAN SERA AND THE SERA OF OTHER ANIMALS INJECTED WITH RSV OR WITH RSV-INDUCED TUMORS.
INHIBITION OF RSV GROWTH BY MYCOPLASMA.
RSV INFECTION OF NON-AVIAN ANIMALS.
DNA REQUIREMENT FOR RSV SYNTHESIS.
51.45A13R2 RPL-12 VIRUS (REGIONAL POULTRY LABORATORY OF USDA IN EAST LANSING, MICHIGAN).
51.45A131 GENERAL INFORMATION ABOUT AVIAN LEUKOSIS AND LYMPHOMATOSIS VIRUSES.
51.45A2 AMPHIBIAN CANCER VIRUSES AND RELATED INFORMATION.
51.45A21 GENERAL.
51.45A22 CANCER VIRUSES IN FROGS AND NEWTS.
51.45A22L1 LUCKE RENAL TUMOR VIRUS AND THE TUMOR IT INDUCES AND RELATED FROG KIDNEY VIRUSES (THE FV1 AND FV2 VIRUSES).
XENOPUS LYMPHOSARCOMA AGENT.
51.45A221 GENERAL.
51.45B1 BOVINE CANCER VIRUSES AND RELATED INFORMATION.
51.45B12 VIRUSES ASSOCIATED WITH BOVINE LEUKEMIA AND BOVINE LYMPHOSARCOMA.
VIRUS-LIKE PARTICLES IN MILK.
METHODS FOR INACTIVATING VIRUS-LIKE PARTICLES IN MILK.

51.45C1 CANINE CANCER VIRUSES AND RELATED INFORMATION.
51.45C12 CANINE LEUKEMIA AND LYMPHOMA VIRUSES.
51.45C13 CANINE SARCOMA VIRUSES.
SEE ALSO: 43.501152 FOR CANINE HEPATITIS.
SEE ALSO: 51.45301151 FOR CELO (AN ADENOVIRUS).
51.45C132 CANINE TRANSMISSIBLE VENERAL SARCOMA TUMOR AGENT.
51.45C14 CANINE TUMORS INDUCED BY NON-CANINE VIRUSES.
CANINE TUMORS INDUCED BY INJECTION OF RSV.
51.45F1 FELINE CANCER VIRUSES AND RELATED INFORMATION.
51.45F12 FELINE LEUKEMIA AND LYMPHOMA VIRUSES.
51.45F13 FELINE SARCOMA VIRUSES.
X 51.45F2 FROG CANCER VIRUSES: SEE AMPHIBIAN CANCER VIRUSES.
51.45F3 FISH CANCER VIRUSES AND RELATED INFORMATION.
51.45F3L1 LYMPHOCYSTIS "TUMOR" CELLS IN FISH.
51.45G1 GUINEA PIG CANCER VIRUSES AND RELATED INFORMATION.
51.45G12 GUINEA PIG LEUKEMIA/LYMPHOMA VIRUSES.
51.45G121 L2C/N-8 LEUKEMIA OF GUINEA PIGS.
51.45G13 GUINEA PIG SARCOMA VIRUSES.
51.45G2 CANCER VIRUSES IN GERM-FREE ANIMALS (AXEMIC AND EX-AXEMIC ANIMALS).
51.45H1 HAMSTER CANCER VIRUSES AND RELATED INFORMATION.
51.45I1 INVERTEBRATE CANCER VIRUSES AND RELATED INFORMATION.
51.45M1 MOUSE AND MURINE CANCER VIRUSES AND RELATED INFORMATION.
51.45M11 GENERAL.
MLV AS HELPER VIRUSES FOR MSV.
COINFECTION WITH MSV AND MLV VIRUSES.
51.45M12 MURINE LEUKEMIA/LYMPHOMA VIRUSES AND RELATED DISEASES.
SEE ALSO: 51.45125 FOR RESPONSE OF LYMPHATIC SYSTEM.
SEE ALSO: 51.454426 FOR RESPONSE OF RETICULOENDOTHELIAL SYSTEM.
SEE ALSO: 51.4512 FOR EFFECT OF THESE VIRUSES ON LYMPHOID AND HEMATOPOIETIC SYSTEM.
51.45M12A1 AKR VIRUS AND SPONTANEOUS LEUKEMIA IN AKR/J MICE.
SEE ALSO: 51.45M13G11 FOR GROSS VIRUS.
51.45M12B1 BREYERE-MOLONEY VIRUS IN BALB MICE AND RELATED PATHOLOGY.
51.45M12C1 CARCINOGEN-INDUCED LEUKEMOGENIC AGENTS IN MICE.
VIRUSES IN MURINE LEUKEMIA/LYMPHOMA INDUCED BY CHEMICAL CARCINOGENS.
INDUCTION OF LEUKEMIA BY EXTRACTS FROM CHEMICALLY INDUCED TUMORS (LEUKEMIA PRODUCED BY EXTRACTS OF A DMBA-INDUCED MAMMARY TUMOR IN MICE).
51.45M12C2 CHLOROLEUKEMIA OR MYELOLEUKEMIA VIRUSES.
MYELOID CHLOROLEUKEMIA VIRUS.
51.45M12E1 MURINE ERYTHROBLASTOSIS VIRUS.
SEE ALSO: 51.454426 FOR EFFECT OF TUMOR VIRUSES ON ERYTHROPOIESIS.
SEE ALSO: 51.453163 FOR POLYCYTHEMIA PRODUCING VIRUS OF MICE.
51.45M12F1 FRIEND VIRUS.
EFFECT ON HEMATOPOIESIS.
PRESENCE OF "FRIEND CELLS".
ROLE OF THE SPLEEN IN THE MULTIPLICATION OF FRIEND VIRUS AND IN THE PROGRESS OF THIS DISEASE.
REVERSAL OF BENEFICIAL EFFECTS OF TREATMENT (CHEMOTHERAPY, IRRADIATION, SPLEENECTOMY) BY INJECTION OF SYNGENEIC SPLEEN CELLS.
INHIBITION OF FRIEND VIRUS GROWTH BY INJECTION OF SENDAI VIRUS.
INCREASED LDH LEVELS IN MICE INFECTED WITH FRIEND VIRUS.
USE OF THESE LEVELS TO FOLLOW THE EFFECT OF CHEMOTHERAPEUTICAGENTS.
SYNERGISTIC ELEVATION OF LDH BY FRIEND VIRUS PLUS THE LDH VIRUS (RILEY VIRUS).
SEE ALSO: 51.4544 FOR EFFECT OF ONCOGENIC VIRUSES ON ERYTHROPOIESIS.
51.45M12G1 GROSS VIRUS (GROSS'S A STRAIN VIRUS) AND SPONTANEOUS LEUKEMIA IN AKR MICE (AKR LEUKEMIA) AND RELATED PATHOLOGY.
SEE ALSO: 51.45124 FOR RELATION OF THE 4-2 (K) ALLELE TO LEUKEMIA INDUCTION BY GROSS VIRUS.
SEE ALSO: 51.45M12A1 FOR SPONTANEOUS LEUKEMIA IN AKR/J MICE.
51.45M12G11 GENERAL.
51.45M12G12 EFFECT ON THE LYMPHOID SYSTEM AND OTHER PATHOLOGY.
51.45M12G2 GRAFFI STRAIN AND RELATED PATHOLOGY.
51.45M12H5 HHLV-2 (VIRUS FROM MICE WITH LEUKEMIA INDUCED BY INJECTION OF SPLEEN EXTRACT FROM HUMAN WITH ALL).

51.45M12K1 KAPLAN VIRUS (SIMILAR TO GROSS'S; FROM X-RAY INDUCED LYMPHOSARCOMA) AND RELATED PATHOLOGY.
"RADIATION LEUKEMIA VIRUS" (RADLV).
SEE ALSO: 51.45M12P5 FOR PUJMAN VIRUS.
SEE ALSO: 51.45M12R1 FOR RADIATION-INDUCED MURINE LEUKEMIA VIRUSES.
51.45M12L4 LACTIC DEHYDROGENASE ELEVATING AGENT (RILEY AGENT).
51.45M12L5 LP VIRUS (PRODUCES LYMPHOMAS IN MICE).
51.45M12M1 MOLONEY LEUKEMIA VIRUS AND RELATED PATHOLOGY.
51.45M12M11 GENERAL.
51.45M12M12 PATHOLOGY OF MOLONEY VIRUS LEUKEMIA.
51.45M12M12 EFFECT OF MOLONEY VIRUS ON LEUKOCYTES AND LYMPH SYSTEM.
51.45M12M2 MALOMUT-PADNOS VIRUS OR MPV.
51.45M12M13 METHODS FOR DETECTING IT BY MEASURING THE VIRUS.
51.45M12M3 MAZURENKO VIRUS (HEMOCYTOBLASTOSIS-RETICULOSIS VIRUS).
51.45M12P2 PRIGOZHINA VIRUS.
51.45M12P5 PUJMAN'S VIRUS (LA VUFB VIRUS AND LAH LEUKEMIC CELL VIRUS) X-RAY-INDUCED IN C57BL, CBA, AND AKR MICE; ALSO IN VACCINIA-INJECTED MICE.
51.45M12R1 RADIATION-INDUCED LEUKEMOGENIC AGENTS IN MICE.
VIRUSES IN MICE AFTER IRRADIATION OR RADIOACTIVE ISOTOPES (P-32).
ROLE OF VIRUSES IN RADIATION-INDUCED LEUKEMIA.
SEE ALSO: 51.45M12K1 FOR KAPLAN VIRUS.
51.45M12R2 RAUSCHER LEUKEMIA VIRUS AND RELATED PATHOLOGY.
SEE ALSO: 51.454426 FOR EFFECT OF ONCOGENIC VIRUSES ON ERYTHROPOIESIS.
51.45M12R3 RICH VIRUS.
51.45M12S1 SCHWARTZ VIRUS AND RELATED PATHOLOGY.
51.45M12S2 STANSKY VIRUS AND RELATED PATHOLOGY.
LYMPHOSARCOMAS AND RETICULAR CELL GROWTHS INDUCED BY THIS VIRUS.
51.45M12S3 STEPINA VIRUS.
51.45M12T1 TENNANT VIRUS (FROM LINE I OF C58 MICE) AND BALB/TENNANT-LEUKEMIA (B/T-L) VIRUS.
51.45M12U1 UNIDENTIFIED LEUKEMOGENIC VIRUSES IN MICE.
VIRUSES AND SPONTANEOUS LEUKEMIA IN C58/J MICE.
VIRUS-LIKE PARTICLES IN MISCELLANEOUS MOUSE LEUKEMIAS (IN NZB/BL MICE AND SJL/J MICE).
51.45M12Z OTHER STRAINS OF MURINE LEUKEMIA/LYMPHOMA VIRUSES.
51.45M121 GENERAL INFORMATION ABOUT MURINE LEUKEMIA/LYMPHOMA VIRUSES.
SEE ALSO: 51.525514 FOR THE TL ANTIGEN.
SEE ALSO: 51.451 FOR GENERAL VIRUS ONCOLOGY TOPICS; EFFECTS OF IMMUNOLOGICAL FACTORS.
51.45M1211 PATHOLOGICAL ASPECTS OF MURINE LEUKEMIA.
51.45M1212 METHODS FOR DETECTION OF MURINE LEUKEMIA VIRUSES; USE OF IMMUNOFLUORESCENCE; USE OF HELPER ACTIVITY FOR MSV (VIRUS RESCUE).
51.45M1213 ANTIGENS IN MICE WITH VIRUS-INDUCED LEUKEMIA OR LYMPHOMA (THE G (GROSS) ANTIGEN AND FMR (FRIEND-MOLONEY-RAUSCHER) ANTIGENS).
51.45M1214 AGENTS WHICH MAY STIMULATE OR ACTIVATE ENDOGENOUS LEUKEMIA VIRUSES; EFFECT OF ERYTHROPOIETIC-STIMULATION FACTORS.
51.45M1214 INDUCTION OF LEUKEMIA OR LYMPHOMA IN SPECIFIC ENVIRONMENTAL SITUATIONS.
LEUKEMIA INDUCTION IN GERM-FREE MICE.
SEE ALSO: 51.451 FOR ROLE OF IMMUNE STIMULATION IN CANCER INDUCTION BY VIRUSES.
51.45M13 MURINE SARCOMA VIRUSES (MSV), INCLUDING FINKEL TYPES, HARVEY TYPES, MOLONEY TYPES, AND KIRSTEN TYPES.
51.45M13R1 RHABDOMYOSARCOMA VIRUS IN MICE.
51.45M14 MOUSE MAMMARY TUMOR VIRUSES.
MAMMARY TUMOR AGENT ( MTA ).
MAMMARY TUMOR INCITER ( MTI ).
BITTNER MAMMARY TUMOR VIRUS ( MTV ).
GENETIC, HORMONAL, IMMUNOLOGICAL AND OTHER FACTORS INFLUENCING TUMOR DEVELOPMENT IN MTI-INFECTED MICE.
A-TYPE AND B-TYPE PARTICLES IN MAMMARY TUMORS AND THEIR RELATION TO EACH OTHER.
MAMMARY TUMOR VIRUSES IN MILK.
INDUCTION OF MOUSE MAMMARY TUMORS BY VIRUSES ISOLATED FROM SPONTANEOUS LEUKEMIA IN C58/J.
USE OF MICRODUCHTERLONEY TECHNIQUES FOR DETECTION OF MAMMARY TUMOR VIRUSES.

51.45M15 POLYCYTHEMIA-PRODUCING VIRUS OF MICE (MURINE POLYCYTHEMIA VIRUS) AND RELATED SPLEEN TUMORS.
SEE ALSO: 51.4523805 FOR MURINE ERYTHOBLASTOSIS VIRUS.
SEE ALSO: 51.454426 FOR RESPONSE OF ERYTHROPOIETIC SYSTEM TO INFECTION WITH ONCOGENIC VIRUSES.
51.45M2 MONKEY CANCER VIRUSES AND RELATED INFORMATION.
51.45M21 GENERAL.
51.45M22 MONKEY LEUKEMIA/LYMPHOMA VIRUSES.
51.45M23 MONKEY SARCOMA AND FIBROMA VIRUSES.
51.45M23S1 SIMIAN VIRUS-40 (SV-40) AND OTHER ONCOGENIC SIMIAN VIRUSES.
THE ADENOVIRUS-7-SV 40 HYBRID (E46+) AND THE PARA PARTICLE (PARTICLE AIDING THE REPLICATION OF ADENOVIRUS).
HYBRIDS OF SV-40 AND ADENOVIRUSES.
SV20, SV33, SV34, SV37, SV38, SA7.
51.45M23Y1 YABA VIRUS:
SUBCUTANEOUS TUMOR VIRUS OF MONKEYS.
51.45P1 PRIMATE CANCER VIRUSES AND RELATED INFORMATION.
SEE ALSO: 51.45M2 FOR MONKEY CANCER VIRUSES.
51.45R1 RAT CANCER VIRUSES AND RELATED INFORMATION.
51.45R12 RAT LEUKEMIA/LYMPHOMA VIRUSES.
51.45R12R1 RAT VIRUS (9H STRAIN) AND ITS LEUKEMOGENICITY.
51.45R13 RAT SARCOMA VIRUSES.
51.45R2 RABBIT CANCER VIRUSES AND RELATED INFORMATION.
51.45R24 FIBROMA, PAPILLOMA, MYXOMA AND RELATED VIRUSES IN RABBITS.
51.45R241 GENERAL.
51.45R242 MYXOMA VIRUS-INDUCED TUMORS IN RABBITS.
51.45R243 ORAL PAPILLOMATOSIS OF RABBITS.
51.45R244 FIBROMATOSIS OF HARES.
51.45R245 SHOPE RABBIT PAPILLOMA VIRUS (SPV).
51.45R2451 GENERAL.
51.45R2452 RABBIT KIDNEY VACUOLATING AGENT ASSOCIATED WITH SPV IN KANSAS RABBIT PAPILLOMA.
51.45R5 REPTILE CANCER VIRUSES AND RELATED INFORMATION.
51.45Z5 MISCELLANEOUS VIRUSES NOT YET ASSIGNED TO MORE SPECIFIC CATEGORIES.
51.45Z5E01 ECHO VIRUSES ISOLATED FROM CANCEROUS HOSTS.
51.45Z5L01 LYMPHOCYTOPENIC VIRUS FROM EHRLICH ASCITES CARCINOMA.
51.45ZN01 NEGRONI AGENT.
51.45Z5T01 TESTIS TUMOR VIRUSES.
51.450 CANDIDATE AND KNOWN HUMAN LEUKEMIA/LYMPHOMA AND OTHER HUMAN CANCER VIRUSES AND RELATED DISEASES.
51.450ES1 ESP-1 HUMAN CANCER CANDIDATE VIRUS (PRIORI).
51.450RD1 RD-114 HUMAN CANCER CANDIDATE VIRUS (MCALLISTER & GARDINER).
51.4501 GENERAL.
51.45011 HUMAN CANCER VIRUSES IN GENERAL.
51.450113 HUMAN CANCER VIRUS TASK FORCE.
51.45012 ROLE OF HERPES-LIKE PARTICLES IN HUMAN CANCER.
51.45013 ROLE OF C-TYPE PARTICLES IN HUMAN CANCER.
51.45014 ROLE OF OTHER TYPES OF PARTICLES IN HUMAN CANCER.
51.45016 TESTS FOR PRESENCE OF CANCER VIRUSES IN HUMAN CANCER TISSUES.
51.450161 GENERAL.
51.4501611 CELL LINES USED TO LOOK FOR LEUKEMIA/LYMPHOMA VIRUSES (PULVEERTAFT LINE, GRACE LINE).
51.450162 MARKER RESCUE EXPERIMENTS USING HUMAN CANCER TISSUE MIXED WITH INACTIVATED ONCOGENIC VIRUSES.
INTERFERING OR INTERFERENCE-PRODUCING ANTIGENS IN HUMAN CANCER.
51.450163 LEUKEMOGENIC ACTIVITY OF HUMAN CANCER TISSUES.
51.450164 TESTS FOR INTERFERON IN HUMAN CANCER TISSUES.
51.4502 UNIDENTIFIED VIRUSES, VIRUS-LIKE PARTICLES, AND STRUCTURES OR PHENOMENA POSSIBLY RELATED TO VIRUSES IN HUMAN PATIENTS WITH LEUKEMIA OR LYMPHOMA.
CANCER INDUCTION IN MICE AND OTHER ANIMALS INJECTED WITH CELLS, TISSUES, AND FLUIDS FROM HUMANS WITH LEUKEMIA OR OTHER TYPES OF CANCER.
VIRUS-LIKE PARTICLES IN MILK OF HUMAN LEUKEMIC PATIENTS.
VIRUS-LIKE PARTICLES IN MULTIPLE MYELOMA.
FORMATION OF MULTINUCLEATED GIANT CELLS (POLYKARYOCYTOSIS) AND PRESENCE OF EMPERIPOLESIS IN LYMPH NODE ORGAN CULTURES.
MYXOMA-LIKE PARTICLES ASSOCIATED WITH HUMAN LEUKEMIA.
HERPES-LIKE VIRUS PARTICLES (LEUKOVIRUS) IN CULTURED CML CELLS.
CRYSTAL-LIKE PROTEIN INCLUSIONS.
PRESENCE OF NON-NUCLEOLAR NUCLEAR BODIES.
PSEUDOVIRAL PARTICLES WITHOUT RNA AND DNA.
SEE ALSO: 62.41364 FOR BOSTICK'S AGENT (ISOLATED FROM HODGKIN'S LYMPH NODES AFTER PASSAGE THROUGH MOUSE BRAIN).

51.4503 VIRUS ROLE IN ETIOLOGY OF BURKITT LYMPHOMA.
VIRUSES FROM PATIENTS WITH BURKITT LYMPHOMA.
51.4505 CANDIDATE HUMAN TUMOR VIRUSES FROM CANCERS OTHER THAN LEUKEMIA/LYMPHOMA.
EFFECT OF BURKITT LYMPHOMA VIRUS IN ANIMALS (MONKEYS).
EPIDEMIOLOGY OF THIS TUMOR AS RELATED TO VIRUS ETIOLOGY.
HERPES-LIKE VIRUSES IN NON-AFRICAN LYMPHOMAS.
HERPES-LIKE VIRUSES IN PATIENTS WITH POST-NASAL LYMPHOMA.
HERPES-LIKE VIRUSES IN EB (EPSTEIN-BURKITT) CELL LINES.
ANTIBODIES TO EB VIRUS IN PATIENTS.
TESTS FOR HERPES-LIKE VIRUSES IN CELL LINES.
SEE ALSO: 51.744525 FOR IMMUNOLOGY OF BURKITT PATIENTS.
SEE ALSO: 51.40252111 FOR EPIDEMIOLOGICAL ASPECTS OF BURKITT LYMPHOMA.
SEE ALSO: 62.40828 FOR HERPES-LIKE VIRUSES IN GENERAL.
SEE ALSO: 51.52532 FOR PATHOLOGY AND HISTOLOGY OF BURKITT CELL LINES.
51.4504 VIROLOGIC ASPECTS OF OTHER TYPES OF HUMAN LEUKEMIA/LYMPHOMA.
PRESENCE OF ANTI-RSV ANTIBODIES IN PATIENTS WITH JUVENILE STEM CELL LEUKEMIA (JSCL) AND OTHER CANCER.
DETECTION, ISOLATION, IDENTIFICATION AND CHARACTERIZATION OF CANCER VIRUSES AND VIRUS-LIKE AGENTS FROM CANCER OTHER THAN LEUKEMIA/LYMPHOMA.
ATTEMPTS TO INDUCE HUMAN CANCER WITH VIRUSES OR VIRUS-LIKE AGENTS.
SEE ALSO: 51.4524 FOR HUMAN LEUKEMIA/LYMPHOMA VIRUSES.
51.451 SELECTED GENERAL TOPICS RELATED TO VIRAL CARCINOGENESIS BOTH IN VIVO AND IN VITRO.
SEE ALSO: 51.454 FOR TOPICS RELATED TO IN VIVO ASPECTS.
SEE ALSO: 51.454 FOR TOPICS RELATED TO IN VITRO ASPECTS.
51.4511 GENERAL.
51.45111 OPEN.
51.45112 REVIEWS, REFERENCES, GENERAL INFORMATION.
51.45113 BROAD STUDIES ON VIRAL CARCINOGENESIS.
51.45114 EPIDEMIOLOGICAL ASPECTS OF VIRUS CARCINOGENESIS.
51.45115 VIRAL CARCINOGENESIS IN AXENIC AND EXAXENIC MICE.
51.45116 GENERAL APPLICATIONS TO VIRUS CANCER RESEARCH.
51.4512 IMMUNOLOGICAL ASPECTS OF VIRAL CARCINOGENESIS AND RELATED INFORMATION.
SEE ALSO: 51.74 FOR TUMOR IMMUNOLOGY (GENERAL).
SEE ALSO: 51.4025267 FOR CORRELATION OF LEUKEMIA OCCURRENCE WITH IMMUNE DISEASES.
SEE ALSO: 51.4513 FOR ROLE OF INTERFERON IN VIRUS-INDUCED CANCER.
51.45121 GENERAL.
51.45122 ANTIGENS OF ONCOGENIC VIRUSES AND VIRUS-INFECTED CELLS.
ANTIBODIES AND OTHER IMMUNOLOGY RELATED TO THESE SPECIFIC ANTIGENS.
SEE ALSO: 47.7322 FOR VIRUS ANTIGENS IN GENERAL.
SEE ALSO: 51.452 FOR ANTIGENS RELATED TO SPECIFIC VIRUSES.
SEE ALSO: 51.4512311 FOR ISOLATION AND CHARACTERIZATION OF ANTIBODIES IN GENERAL.
SEE ALSO: 51.455471 FOR CHANGES IN MEMBRANE COMPOSITION AFTER VIRUS INFECTION.
51.45122AD ADENOVIRUS ANTIGENS AND ADENOVIRUS-ASSOCIATED ANTIGENS AND RELATED ANTIBODIES.
51.45122FM FMR ANTIGENS (FRIEND, MOLONEY, RAUSCHER) AND RELATED ANTIBODIES.
51.45122G- G ANTIGEN (GROSS) AND RELATED ANTIBODIES.
CROSS-REACTION OF G ANTIGEN WITH THE H-2.8 ANTIGEN AND WITH GRAFFI VIRUS.
51.45122GR GRAFFI VIRUS-RELATED ANTIGENS (THE GR ANTIGENS) AND RELATED ANTIBODIES.
51.45122ML ML ANTIGEN ASSOCIATED WITH MAMMARY CANCER AND RELATED ANTIBODIES.
51.45122MS MSV ANTIGENS AND RELATED ANTIBODIES.
51.45122MT MTV ANTIGENS AND RELATED ANTIBODIES.
51.45122PO POLYOMA-ASSOCIATED ANTIGENS AND RELATED ANTIBODIES.
51.45122RS RSV ANTIGENS AND RELATED ANTIBODIES.
51.45122SV SV-40 - ASSOCIATED ANTIBODIES AND RELATED ANTIBODIES.
51.45122T- THE T ANTIGEN (TUMOR ANTIGEN) IN CELLS INFECTED WITH DNA VIRUSES AND IN VIRUS-INDUCED TUMORS AND RELATED ANTIBODIES.
51.45122TL THE TL ANTIGEN AND RELATED ANTIBODIES.
SEE ALSO: 51.45124 FOR RELATION OF THIS ANTIGEN TO THE H-2 LOCUS.
SEE ALSO: 51.525524 FOR THYMUS LEUKEMIA AND THE TL ANTIGEN ASSOCIATED WITH SPONTANEOUS AND X-RAY INDUCED LEUKEMIA.
51.45122V- THE V ANTIGEN AND RELATED ANTIBODIES.
51.45122X- THE X ANTIGEN (RABBIT PAPILLOMA ANTIGEN?) AND RELATED ANTIBODIES.
51.45122ZZ ANTIGENS ASSOCIATED WITH OTHER ONCOGENIC VIRUSES AND RELATED ANTIBODIES.

51.451221 GENERAL.
51.45122101 OPEN.
51.45122102 CORRELATION OF HIGH ANTIGEN ACTIVITY WITH HIGH RATE OF VIRUS PRODUCTION AND RELEASE.
51.45122103 ANTIGENICITY OF ONCOGENIC VIRUSES (IN GENERAL).
51.451222 TRANSPLANTATION ANTIGENS INDUCED BY ONCOGENIC VIRUSES (GENERAL).
SUB-CELLULAR LOCATION OF THESE ANTIGENS.
OCCURRENCE OF TRANSPLANTATION ANTIGENS AS CELL SURFACE ANTIGENS IN CELL MEMBRANES.
ABILITY OF VIRUS-RELATED ANTIGENS TO INDUCE RESISTANCE TO VIRUS-INDUCED TUMORS.
MECHANISM OF THIS RESISTANCE (ANTIBODIES, IMMUNE CELLS).
51.451223 CF (COMPLEMENT FIXING) ANTIGENS INDUCED BY ONCOGENIC VIRUSES (GENERAL).
51.45123 ANTIBODIES AGAINST TUMOR-INDUCING VIRUSES AND THEIR PROPERTIES.
SEE ALSO: 51.743 FOR ANTITUMOR ANTIBODIES IN GENERAL.
SEE ALSO: 51.4125 FOR EFFECT OF HOST IMMUNE STATUS ON TUMOR INDUCTION BY VIRUSES.
51.451231 GENERAL.
51.4512311 ISOLATION AND CHARACTERIZATION OF VIRUS ANTIBODIES (GENERAL ASPECTS).
51.451232 PRODUCTION OF ANTIBODIES AGAINST ONCOGENIC VIRUSES.
OCCURRENCE AND DISTRIBUTION OF ANTIBODIES AGAINST CANCER VIRUSES.
SEE ALSO: 51.45126 FOR ROLE OF THE THYMUS IN RESISTANCE TO ONCOGENIC VIRUSES AND VIRUS-INDUCED TUMORS.
51.451233 FLUORESCENT ANTIBODIES AGAINST ONCOGENIC VIRUSES AND VIRUS-CONTAINING CELLS.
USES OF THESE ANTIBODIES.
AMOUNT OF FLUORESCENCE (FLUORESCENCE INDEX).
51.451234 CYTOTOXIC PROPERTIES OF THESE ANTIBODIES.
51.451235 HEMADSORPTION BY VIRUS-INFECTED TISSUE.
51.451236 USE OF ANTIBODIES TO IMMUNIZE ANIMALS AGAINST ONCOGENIC VIRUSES AND AGAINST VIRUS-INDUCED TUMORS.
51.45124 OTHER ASPECTS OF IMMUNE STATUS AND IMMUNE RESPONSE AS RELATED TO ONCOGENIC VIRUSES, VIRUS-INDUCED TUMORS, AND INDUCTION OF TUMORS BY ONCOGENIC VIRUSES.
ROLE OF THESE IMMUNE RESPONSES IN SUSCEPTIBILITY TO ONCOGENIC VIRUSES.
IMMUNE METHODS WHICH STIMULATE OR INHIBIT THE DEVELOPMENT OF VIRUS-INDUCED TUMORS.
SEE ALSO: 51.4114 FOR ROLE OF IMMUNE FACTORS IN CARCINOGENESIS (GENERAL).
51.451241 GENERAL.
51.4512411 ROLE OF IMMUNE MECHANISMS IN THE SPONTANEOUS REPRESSION OF TUMORS AND IMMUNE SURVEILLANCE IN GENERAL.
51.451242 ROLE OF THE THYMUS IN DEVELOPMENT OF VIRUS-INDUCED TUMORS AND HOST RESISTANCE TO THEM.
EFFECT OF THYMECTOMY OR THYMUS GRAFTS ON VIRUS-INDUCED TUMORS.
SEE ALSO: 51.412523 FOR ROLE OF THYMUS IN LEUKEMOGENESIS (IN GENERAL).
51.451243 ROLE OF LEUKOCYTES, SPLEEN CELLS, AND OTHER LYMPHOID CELLS IN DEVELOPMENT OF VIRUS-INDUCED TUMORS AND HOST RESISTANCE TO THEM.
INHIBITION OF VIRAL CARCINOGENESIS BY ADMINISTRATION OF IMMUNE (SENSITIZED) CELLS.
51.451244 OPEN.
51.451245 USE OF ATTENUATED VIRUS AND VIRAL ANTIGENS TO INHIBIT VIRAL CARCINOGENESIS.
51.4512451 GENERAL.
51.4512452 INHIBITION OF VIRUS-INDUCED CANCER BY TREATING HOSTS WITH ATTENUATED VIRUSES (LIVE VIRUS VACCINES).
51.4512453 INHIBITION OF VIRUS-INDUCED CANCER BY TREATING HOSTS WITH VIRUS ANTIGENS.
51.4512454 INHIBITION OF VIRUS-INDUCED CANCER BY TREATING HOSTS WITH VIRUS-INDUCED TUMOR CELLS OR EXTRACTS OF VIRUS-INDUCED TUMOR CELLS.
51.45125 ROLE OF TRANSPLANTATION ANTIGENS AND RELATED GENES AND GENETIC LOCI, SUCH AS THE H-2(K) LOCUS TO VIRAL CARCINOGENESIS.
ROLE OF IMMUNE MECHANISMS IN THIS SUSCEPTIBILITY.
SEE ALSO: 51.4113 FOR ROLE OF GENETIC FACTORS IN CANCER DEVELOPMENT (GENERAL).
SEE ALSO: 51.45122TL FOR THE TL ANTIGEN AND ITS RELATION TO VIRAL LEUKEMIA.
SEE ALSO: 51.742 FOR OTHER TUMOR IMMUNOLOGY RELATED TO THE H-2 LOCUS.

51.451251 GENERAL.
51.451252 SUSCEPTIBILITY GENES.
THE RQU SUSCEPTIBILITY GENES FOR GROSS VIRUS.
51.4513 ROLE OF INTERFERON AND OTHER VIRUS INTERFERENCE PHENOMENA IN INHIBITING TUMOR INDUCTION BY ONCOGENIC VIRUSES.
SEE ALSO: 51.22726 FOR CLINICAL USE OF INTERFERON.
SEE ALSO: 51.32734 FOR PRECLINICAL STUDIES OF INTERFERON THERAPY.
SEE ALSO: 62.2335 FOR INTERFERONS (GENERAL).
SEE ALSO: 62.2312 FOR MORE GENERAL ASPECTS OF INTERFERENCE.
SEE ALSO: 51.4562 FOR VIRAL TUMOR INDUCTION IN GERM-FREE (AXENIC) MICE.
51.45131 GENERAL.
51.451313 EFFECT OF RADIATION ON INTERFERENCE PHENOMENA AND INTERFERON INDUCTION.
51.45132 INTERFERON INDUCTION BY VIRUSES.
EFFECT OF MULTIPLE, CONCURRENT VIRAL INFECTIONS ON TUMOR INDUCTION.
INHIBITION OF VIRUS-INDUCED CANCER BY INFECTIONS WITH NON-ONCOGENIC VIRUSES.
INHIBITION OF VIRUS CANCER INDUCTION BY EXTRACTS FROM VIRUS-INFECTED CELLS.
SEE ALSO: 51.453511 FOR ENHANCEMENT OF ADENOVIRUS GROWTH BY SUPER INFECTION WITH SV40.
51.45133 INTERFERON INDUCTION BY CHEMICAL AGENTS.
51.45133P01 INTERFERON INDUCTION BY POLY-IC.
51.4514 OTHER AGENTS (INCLUDING DRUGS AND OTHER CHEMICALS) AND PROCEDURES THAT PREVENT CANCER INDUCTION OR MALIGNANT TRANSFORMATION BY ONCOGENIC VIRUSES.
SEE ALSO: 54.155 FOR ANTIVIRAL CHEMOTHERAPY IN GENERAL.
SEE ALSO: 51.45173 FOR CORTICOIDS AND OTHER NATURAL AND SYNTHETIC HORMONES THAT PREVENT OR INHIBIT CANCER VIRUS ACTION.
51.4514DNA- DNA.
51.4514HEPA HEPARIN.
51.4514MERC 6-MERCAPTOPURINE AND RELATED COMPOUNDS.
51.4514PAOL PAOLINS (FROM MOLLUSCS).
51.4514POLY POLYNUCLEOTIDES (NATURAL AND SYNTHETIC).
51.4514RIFA RIFAMPICIN AND RELATED COMPOUNDS.
51.4514RNA- RNA.
51.4514THIO 6-THIOGUANINE.
51.45141 GENERAL.
51.4515 OPEN.
51.4516 INDUCTION OF TUMORS WITH FILTERABLE AGENTS FROM TUMORS INDUCED BY CARCINOGENIC AGENTS OTHER THAN VIRUSES (CHEMICAL CARCINOGENS, RADIATION, HORMONES).
SEE ALSO: 51.481 FOR CARCINOGENIC ACTIVITY OF OTHER EXTRACTS FROM TUMORS AND TUMOR BEARING HOSTS.
ROLE OF VIRUSES IN CANCER INDUCTION BY CHEMICAL CARCINOGENS OR OTHER CARCINOGENIC AGENTS IN VIVO AND IN VITRO.
SYNERGISM AND ANTAGONISM BETWEEN VIRUSES AND OTHER CARCINOGENIC AGENTS.
SEE ALSO: 51.45133 FOR INTERFERON INDUCTION BY CHEMICAL AGENTS.
51.45161 GENERAL.
51.45162 ABILITY OF CHEMICALS (INCLUDING DRUGS) TO STIMULATE CANCER INDUCTION OR MALIGNANT TRANSFORMATION BY ONCOGENIC VIRUSES.
CARCINOGENIC ACTIVITY OF CELL-FREE FILTRATES FROM HYDROCARBON-INDUCED TUMORS.
SEE ALSO: 51.4514 FOR INHIBITION OF VIRAL CARCINOGENESIS BY CHEMICALS.
51.45163 ABILITY OF ONCOGENIC VIRUSES TO STIMULATE OR INHIBIT CANCER INDUCTION OR MALIGNANT TRANSFORMATION BY CHEMICAL CARCINOGENS.
SPECIFIC VIRUSES FOUND IN CHEMICALLY-INDUCED TUMORS.
51.4517 VIRUSES PLUS OTHER SELECTED AGENTS (RADIATION, HORMONES, ENDOCRINE GLANDS).
SYNERGISM AND ANTAGONISM BETWEEN THESE AGENTS DURING INDUCTION OF CANCER OR MALIGNANT TRANSFORMATION IN VIVO AND IN VITRO.
51.45171 GENERAL.
51.45173 SYNERGISM AND ANTAGONISM BETWEEN VIRUSES AND HORMONES (OR ENDOCRINE GLANDS) IN CANCER ETIOLOGY.
51.451731 GENERAL.
51.451732 EFFECT OF THE PITUITARY OR HYPOPHYSEAL HORMONES ON TUMOR INDUCTION BY VIRUSES.
51.451733 EFFECT OF THE THYROID AND THYROID HORMONES ON TUMOR INDUCTION BY VIRUSES.
51.451734 EFFECT OF THE PARATHYROID GLAND AND RELATED HORMONES ON TUMOR INDUCTION BY VIRUSES.

51.451735 EFFECT OF CORTICOIDS AND OTHER ADRENAL HORMONES AND ADRENAL GLAND ON TUMOR INDUCTION BY VIRUSES.
EFFECT OF METHYL PREDNISOLONE AND OTHER SYNTHETIC CORTICOID-LIKE AGENTS.
51.451736 EFFECT OF SEX GLANDS AND RELATED HORMONES (ANDROGENS AND ESTROGENS) ON TUMOR INDUCTION BY VIRUSES.
51.451737 EFFECT OF INSULIN AND OTHER PANCREATIC HORMONES ON TUMOR INDUCTION BY VIRUSES.
51.451738 EFFECT OF NEUROENDOCRINE SUBSTANCES (HISTAMINE) ON TUMOR INDUCTION BY VIRUSES.
51.451739 EFFECT OF OTHER HORMONES AND ENDOCRINE GLANDS ON TUMOR INDUCTION BY VIRUSES.
51.45174 VIRUSES PLUS RADIATION IN CANCER ETIOLOGY.
SYNERGISM AND ANTAGONISM BETWEEN THESE AGENTS.
SEE ALSO: 51.451313 FOR EFFECT OF RADIATION ON INTERFERENCE PHENOMENA.
51.45175 VIRUSES PLUS OTHER PHYSICAL CONDITIONS OR AGENTS.
51.451751 VIRUSES PLUS HEAT OR LOW TEMPERATURES.
51.4519 OTHER GENERAL TOPICS RELATED TO VIRAL CARCINOGENESIS.
SEE ALSO: 51.45436 FOR VIRUS ONCOGENESIS IN SPECIFIC TYPES OF ANIMALS.
51.451901 CARCINOGENIC ACTIVITY OF NUCLEIC ACIDS EXTRACTED FROM ONCOGENIC VIRUSES OR VIRUS-INDUCED TUMORS.
SEE ALSO: 51.481 FOR CARCINOGENIC ACTIVITY OF OTHER EXTRACTS FROM TUMORS OR TUMOR-BEARING HOSTS.
51.452 RNA TUMOR VIRUSES INCLUDING C-TYPE VIRUSES IN GENERAL.

NOTE: THIS CATEGORY IS BEING REVISED AND COULD NOT BE COMPLETED IN TIME FOR THIS PRINTING.

51.4521 GENERAL.
51.4522 CANDIDATE C-TYPE VIRUSES AND OTHER RNA TUMOR VIRUSES AND VIRUS-LIKE PARTICLES FROM ANIMAL TUMORS.
METHODS OF DETECTING THESE CANCER VIRUSES.
51.453 DNA VIRUSES IN GENERAL AND THEIR ROLE IN CANCER.
SEE ALSO: 51.451225 FOR THE T ANTIGEN AND ITS APPEARANCE IN CELLS INFECTED WITH DNA VIRUSES.
51.453A1 ADENOVIRUSES.
51.453A1 RELATION BETWEEN ADENOVIRUS AND ADENO-ASSOCIATED VIRUS (AAV) OR ADENO-SATELLITE VIRUS.
THE PARA PARTICLES; PARTICLE AIDING REPLICATION OF ADENOVIRUS.
NON-HUMAN ADENOVIRUSES.
CANINE HEPATITIS VIRUS (A DOG ADENOVIRUS).
CELO (CHICKEN LETHAL ORPHAN VIRUS).
SEE ALSO: 51.453191 SV40-ADENOVIRUS HYBRIDS.
SEE ALSO: 51.4530401 FOR DNA VIRUSES IN GENERAL.
51.453A100 GENERAL.
51.453A103 ADENOVIRUS 3.
51.453A107 ADENOVIRUS 7.
51.453A112 ADENOVIRUS 12 (HUIE STRAIN).
51.453A118 ADENOVIRUS 18 (STRAIN D. C.).
51.453A131 ADENOVIRUS 31.
51.453F1 FIBROMA VIRUSES OTHER THAN FOR RABBITS.
SQUIRREL AND DEER FIBROMA.
SEE ALSO: 51.453181 FOR RABBIT FIBROMA VIRUS.
51.453H1 HERPES-LIKE VIRUSES.
SEE ALSO: 51.450 FOR HERPES-LIKE VIRUSES IN HUMAN CANCER CELLS.
51.453H2 HEPATITIS VIRUSES.
POSSIBLE ONCOGENIC EFFECT OF RUEBNER MURINE HEPATITIS VIRUS.
51.453H3 H-VIRUSES.
51.453M5 MYXOMA VIRUS-INDUCED TUMORS IN RABBITS: SEE 51.45R245.
51.453P1 POLYOMA VIRUS (SEE POLYOMA; STEWARD-EDDY POLYOMA; MOUSE PAROTID TUMOR VIRUS).
TUMORS AND PATHOLOGY INDUCED BY POLYOMA VIRUS.
TEMPERATURE-SENSITIVE MUTANTS OF POLYOMA VIRUS.
51.453P2 PAPILLOMA VIRUSES IN SPECIES OTHER THAN RABBITS.
SEE ALSO: 51.45R12 FOR RABBIT PAPILLOMA.
SEE ALSO: 51.453W11 FOR WART VIRUSES.
51.453P281 BOVINE PAPILLOMATOSIS.
51.453P2C1 CANINE PAPILLOMATOSIS.
51.453P2E1 EQUINE PAPILLOMATOSIS.
51.453P2G1 PAPILLOMATOSIS OF CHAMOIS AND GOATS.

51.453P2P1 GENITAL PAPILLOMA OF PIGS.
51.453P21 GENERAL INFORMATION ON PAPILLOMA VIRUSES.
51.453R2 RILEY VIRUS OR LACTIC DEHYDROGENASE-ELEVATING VIRUS OR LDV (CARRIED ALONG DURING PROPAGATION OF MOUSE TUMORS).
SEE ALSO: 51.45232 FOR SYNERGISTIC INCREASE IN LDH LEVELS IN MICE INFECTED WITH BOTH LDH VIRUS AND FRIEND VIRUS.
51.453S1 SALIVARY GLAND VIRUS (SGV) (POSSIBLY ONCOGENIC).
X 51.453S3 SHOPE FIBROMA VIRUS: SEE 51.45R245 FOR ALL INFORMATION.
51.453W1 WART VIRUSES (INCLUDING BIVINS' VIRUS).
INFECTIOUS WARTS IN MAN (VERRUCA VULGARIS, MYRMECIA, HUMAN PAPILLOMA, COMMON WART, CONDYLOMA).
REGRESSION OF WARTS FROM INJECTION OF VACCINIA VIRUS AND OTHER WART VACCINES.
SEE ALSO: 51.453P2 FOR PAPILLOMA VIRUSES.
51.454 SELECTED HOST-VIRUS-TUMOR INTERRELATIONSHIPS IN VIVO.
SEE ALSO: 51.454 FOR IN VITRO INTERRELATIONSHIPS.
SEE ALSO: 51.452 AND 51.453 FOR STUDIES OF SPECIFIC VIRUSES.
SEE ALSO: 51.4512 FOR IMMUNOLOGICAL ASPECTS.
MALOMUT-PADNOS VIRUS OR MPV.
51.4541 GENERAL.
51.4542 CYTOLOGICAL AND FINE STRUCTURE STUDIES OF CELLS FROM HUMANS AND ANIMALS INFECTED WITH ONCOGENIC VIRUSES.
SEE ALSO: 51.45523 FOR VIRUS INCLUSION BODIES AND THEIR PROPERTIES.
SEE ALSO: 51.4552 FOR CYTOLOGY OF CULTURED CELLS INFECTED WITH ONCOGENIC VIRUSES.
SEE ALSO: 51.4533 AND 51.4534 FOR SEARCHES FOR CANDIDATE TUMOR VIRUSES.
51.45421 GENERAL.
51.45422 ELECTRON MICROSCOPIC AND FINE STRUCTURE STUDIES.
51.45423 LIGHT MICROSCOPY AND HISTOCHEMICAL STUDIES.
51.45424 EFFECT OF VIRUS ON CHROMOSOMES (IN VIVO).).
51.4543 NON-IMMUNOLOGICAL ENDOGENOUS FACTORS AFFECTING TUMOR INDUCTION BY ONCOGENIC VIRUSES.
SEE ALSO: 51.4512 FOR IMMUNOLOGICAL ASPECTS OF HOST-TUMOR INTERRELATIONS.
SEE ALSO: 51.45G2 FOR VIRAL CARCINOGENESIS IN GERM-FREE ANIMALS (AXENIC MICE).
SEE ALSO: 51.4513 FOR INTERFERON ROLE IN VIRUS-INDUCED CANCER.
51.4544 PHYSIOLOGY AND BIOCHEMISTRY OF ANIMALS INFECTED WITH ONCOGENIC VIRUSES.
NON-ONCOGENIC EFFECTS OF ONCOGENIC VIRUSES ON SPECIFIC TISSUES.
SEE ALSO: 51.554 FOR EFFECT OF ONCOGENIC VIRUSES ON BIOCHEMISTRY OF CELLS AND TISSUES (CULTURED IN VITRO OR FROM INFECTED ANIMALS).
SEE ALSO: 51.455 FOR EFFECT OF ONCOGENIC VIRUSES ON BIOCHEMISTRY OF CELLS AND TISSUES (CULTURED IN VITRO OR FROM INFECTED ANIMALS).
51.45441 GENERAL.

NOTE: THE FOLLOWING CATEGORIES DEAL WITH THE EFFECT OF ONCOGENIC VIRUSES ON SPECIFIC TISSUES.

51.454425 EFFECT ON LEUCOCYTES AND LYMPHATIC SYSTEM.
SEE ALSO: 51.451224 FOR THYMUS LEUKEMIA.
51.454426 EFFECT ON BLOOD AND ERYTHOPOIESES.
POLYCYTHEMIA PRODUCED BY CANCER VIRUS.
RESPONSE OF THE ERYTHROPOIETIC SYSTEM TO INFECTION BY ONCOGENIC VIRUSES.
SEE ALSO: 51.453163 FOR POLYCYTHEMIA-INDUCING VIRUS.
SEE ALSO: 51.452244 FOR AVIAN ERYTHROBLASTOSIS VIRUS.
SEE ALSO: 51.4523805 FOR MURINE ERYTHROBLASTOSIS VIRUS.
STIMULATION OF ERYTHROPOIESIS BY RAUSCHER AND FRIEND VIRUS AND POLYCYTHEMIA VIRUSES.
51.454442 EFFECT ON KIDNEY.
RENAL LESIONS PRODUCED BY CANCER VIRUSES (POLYCYTHEMIA-INDUCING VIRUS AND RAUSCHER VIRUS).
51.454452 EFFECT ON LUNGS.
51.4545 NATURE OF THE INFECTIOUS PROCESS.
51.45451 GENERAL.
51.45452 MECHANISM OF INFECTION AND TRANSMISSION OF TUMOR VIRUSES.
51.454521 GENERAL.
51.454522 AIR-BORNE TRANSMISSION.
51.454523 TRANSMISSION THROUGH DIRECT CONTACT OR VIA FECES.

51.454524 TRANSMISSION VIA INSECT VECTORS.
ROLE OF MOSQUITOS IN TUMOR TRANSMISSION.
DIFFERENTIATION BETWEEN TRANSFER OF VIRUSES AND TRANSFER OF TUMOR CELLS.
SEE ALSO: 51.525422 FOR TRANSMISSION OF BURKITT LYMPHOMA.
51.454525 TRANSMISSION FROM PARENT TO OFFSPRING.
TRANSMISSION OF VIRUSES TO EMBRYOS.
51.454526 VIA MILK; ISOLATION OF VIRUSES FROM MILK.
SEE ALSO: 51.45313 FOR ALL INFECTIOUS TRANSMISSION OF MTA VIA MILK.
51.45453 VIRUS CONTENT OF TUMORS INDUCED BY VIRUS.
51.45454 LENGTH OF THE INDUCTION PERIOD.
51.45456 RATE OF CLEARANCE OF INJECTED VIRUSES.
51.45457 RECOVERY OF VIRUSES FROM INFECTED HOSTS.
51.45458 DISTRIBUTION OF VIRUSES IN THE BODY.
LOCALIZATION IN SPECIFIC TISSUES.
51.4546 VIRUS-INDUCED TUMORS IN SPECIFIC ANIMALS.
51.454601 GENERAL.
51.455 SELECTED HOST-VIRUS-TUMOR INTERRELATION IN VITRO.

51.4550 GENERAL.
51.45501 OPEN.
51.45502 CELL LINES DERIVED FROM VIRUS-INDUCED TUMORS OR OTHER VIRUS-INFECTED CELL LINES.
51.4551 MALIGNANT TRANSFORMATION OF CULTURED CELLS BY ONCOGENIC VIRUSES.
RELATED CHANGES IN MORPHOLOGY, MITOSIS, GLYCOLYSIS, CELL PROLIFERATION AND CONTACT INHIBITION.
CHANGES IN MITOCHONDRIA, MICROSOMES, MEMBRANES, AND LYSOSOMES AS RELATED TO TRANSFORMATION.
GROWTH OF TRANSFORMED CELLS WHEN INJECTED INTO ANIMALS.
SEE ALSO: 51.5112 FOR MALIGNANT TRANSFORMATION, GENERAL.
51.4552 CYTOLOGICAL AND FINE STRUCTURE STUDIES OF CULTURED CELLS INFECTED WITH ONCOGENIC VIRUSES.
SEE ALSO: 51.4542 FOR CYTOLOGICAL STUDIES OF CELLS FROM ANIMALS INFECETED WITH ONCOGENIC VIRUSES.
51.45521 GENERAL; CLONES DERIVED FROM VIRUS-INFECTED CELLS.
51.45522 CHROMOSOME ALTERATIONS AND DAMAGE INDUCED BY VIRUSES.
51.45523 CHROMOSOME ABERRATIONS INDUCED BY SCHMIDT-RUPPIN VIRUS AND ADENOVIRUSES.
IMMUNOLOGICAL STUDIES OF CULTURED VIRUS-INFECTED CELLS.
51.45525 MISCELLANEOUS PHENOMENA IN VIRUS INFECTED CELLS.
51.4552501 MULTINUCLEATION.
51.4552502 VIRUS INCLUSION BODIES AND THEIR PROPERTIES.
COLONY SIZE AND OTHER COLONY CHARACTERISTICS AND GROSS CELL MORPHOLOGY AND CYTOLOGY.
51.4552503 CYTOPATHIC EFFECTS.
51.4553 MECHANISM OF MALIGNANT TRANSFORMATION OF CELLS BY ONCOGENIC VIRUSES (IN VITRO).
51.4554 MECHANISM OF ONCOGENIC VIRUS REPLICATION AND RELATED CELL BIOCHEMISTRY, CELL BIOLOGY, AND VIRAL BIOCHEMISTRY.
SEE ALSO: 62.23 FOR MECHANISM OF VIRAL REPLICATION IN GENERAL.
SEE ALSO: 51.4545 FOR PHYSIOLOGY OF ANIMALS INFECTED WITH ONCOGENIC VIRUSES (NON-ONCOGENIC EFFECT OF VIRUSES ON THE HOST).
SEE ALSO: 51.4552 FOR EFFECT OF ONCOGENIC VIRUSES ON THE MORPHOLOGY AND CYTOLOGY OF CULTURED CELLS.
SEE ALSO: 51.4512 FOR IMMUNOLOGICAL CHANGES IN INFECTED CELLS.
51.45540 GENERAL.
51.45541 EFFECT ON ENZYMES AND METABOLISM RELATED TO NUCLEIC ACID.
SEE ALSO: 51.4536 FOR TUMOR INDUCTION BY ISOLATED NUCLEIC ACIDS FROM ONCOGENIC VIRUSES OR INFECTED CELLS.
51.4554101 GENERAL.
51.4554102 PROPERTIES OF NUCLEIC ACIDS FROM VIRUS INFECTED CELLS.
51.4554103 PRESENCE OF VIRAL GENES OR VIRUS-SPECIFIC NUCLEIC ACIDS.
51.4554104 ALTERED OR INHIBITED NUCLEIC ACID SYNTHESIS IN INFECTED CELLS.
51.4554105 POSSIBLE ROLE OF HISTONE IN ALTERING NUCLEIC ACID AND NUCLEIC ACID METABOLISM IN INFECTED CELLS.
51.4554106 SYNTHESIS OF VIRUS NUCLEIC ACID IN INFECTED CELLS.
51.4554107 EFFECT OF VIRUSES ON METHYLATION OF RNA.
51.455411 GENERAL.
51.455412 DNA SYNTHESIS.
51.455413 RNA SYNTHESIS.
51.45542 ENZYMES AND METABOLISM RELATED TO AMINO ACIDS AND PROTEINS:
ARGINASE INDUCTION BY THE SHOPE VIRUS.
SYNTHESIS OF VIRUS PROTEIN IN INFECTED CELLS.
LOW ARGININE AND HIGH CITRULLINE IN POLYOMA VIRUS-INFECTED CELLS.

51.45543 ENZYMES AND METABOLISM RELATED TO LIPIDS.
SYNTHESIS OF VIRUS LIPID IN INFECTED CELLS.
51.45544 ENZYMES AND METABOLISM RELATED TO CARBOHYDRATES, GLYCOLYSIS, AND THE KREBS CYCLE.
CARBOHYDRATES OF ONCOGENIC VIRUSES.
51.45545 ENZYMES AND METABOLISM RELATED TO VITAMINS.
51.45546 OTHER ENZYMES AND METABOLISM.
51.45547 EFFECT OF VIRUSES ON OTHER ASPECTS OF CELL PHYSIOLOGY.
51.455471 GENERAL.
51.455471 EFFECT ON CONTACT INHIBITION, CELL MEMBRANES AND MEMBRANE PROPERTIES.
CHANGES IN BIOCHEMISTRY (GLYCOLIPIDS, GLYCOPROTEINS, ETC.) OF CELL MEMBRANES AFTER VIRUS INFECTIONS AND VIRUS-INDUCED TRANSFORMATION.
51.4555 OTHER ASPECTS OF ONCOGENIC VIRUS REPRODUCTION NOT INCLUDED ABOVE.
51.45551 GENERAL.
51.45552 ADSORPTION OF CANCER VIRUSES TO HOST CELLS AND PENETRATION.
51.45553 PENETRATION OF VIRUSES THROUGH CELL MEMBRANES.
51.45554 ASSEMBLY OF VIRAL SUB-UNITS AND FORMATION OF CANCER VIRUSES INSIDE HOST CELLS.
51.45555 RELEASE OF CANCER VIRUSES FROM CELLS.
51.455551 GENERAL.
51.455552 NATURE AND MECHANISM OF BUDDING OF ONCOGENIC VIRUSES FROM CELL MEMBRANES.
51.455553 NATURE AND MECHANISM OF CELL LYSIS BY ONCOGENIC VIRUSES.
51.45556 REACTIVATION OF HEAT-INACTIVATED VIRUS.
51.4556 METHODS FOR DEMONSTRATING INFECTION OF CELLS WITH ONCOGENIC VIRUSES.
51.455601 GENERAL.
51.455602 USE OF ELECTRON MICROSCOPY.
51.455603 IMMUNOFLUORESCENCE.
51.455604 USE OF INTERFERENCE PHENOMENA BY SUPERINFECTION WITH OTHER VIRUSES (VSV OR HSV).
51.455605 USE OF MARKER RESCUE AND OTHER GENETIC RECOMBINATION EXPERIMENTS.
MIXING CANDIDATE SAMPLES WITH INFECTED SAMPLES OF KNOWN ONCOGENIC VIRUSES.
51.455606 METHODS FOR INDUCING LATENT VIRUSES.
51.456 STUDIES OF ISOLATED ONCOGENIC VIRUSES (GENERAL).
SEE ALSO: 51.4501 TO 51.4526 FOR SPECIFIC VIRUSES.
SEE ALSO: 62.2 FOR MORE GENERAL STUDIES ON VIRUSES.
51.4560 GENERAL.
51.4561 MORPHOLOGY AND PHYSICAL PROPERTIES.
SEDIMENTATION STUDIES.
EFFECT OF SNAKE VENOM ON STUCTURE OF VIRUSES.
INCOMPLETE VIRUS PARTICLES.
51.4562 COMPOSITION OF ISOLATED VIRUSES.
51.45620 GENERAL.
51.45621 NUCLEIC ACIDS, NUCLEOTIDES, NUCLEASES, AND OTHER NA-RELATED COMPONENTS OF ONCOGENIC VIRUSES.
51.45622 PROTEINS, PEPTIDES, AND AMINO ACIDS OF ONCOGENIC VIRUSES.
51.45623 LIPIDS OF ONCOGENIC VIRUSES.
51.45624 CARBOHYDRATES OF ONCOGENIC VIRUSES.
51.45625 ENZYMES OF ONCOGENIC VIRUSES.
51.45626 CARBOHYDRATES OF ONCOGENIC VIRUSES.
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51.46 CARCINOGENIC ORGANIC CHEMICALS; CHEMICAL CARCINOGENESIS.
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51.46AAF11 AAF (2-ACETYLAMINO-FLUORENE OR 2-ACETAMIDO-FLUORENE OR N-2-FLUORENYLACETAMIDE).
51.46AAF1114 AAF, 2-TRIFLUORO-.
51.46AAF12 AAF ANALOGS.
51.46AAF1201 N-HYDROXY-AAF.
51.46AAF1202 N-ACETOXY-AAF.
N-ACETOXY-2-ACETYL-AMINO-FLUORINE, N-ACETOXY-N-2-FLUORENYLACETAMIDE.
51.46AAF1203 COPPER CHELATED OF N-HYDROXY-2-AAF.
51.46ACENA ACENAPHTHENE, 5-AMINO-.
51.46ACENA ACENAPHTHENE, 5-NITRO.
51.46ACETA ACETAMIDE, N-METHYL-N-NITROSO-.
51.46ACTH- ACTH.
51.46ACTIN ACTINOMYCIN D.
X 51.46ADBF- 2-M-3-ADBF: SEE DIBENZOFURAN, 2-METHOXY-3-AMINO-.
51.46AFLAT AFLATOXINS.
51.46AFLAT11 AFLATOXIN B1.
51.46ALUMI ALUMINUM DEXTRAN.
51.46AM-AZ AMINOAZOBENZENE, N-BENZOYLOXY-N-METHYL-4-.
51.46AM-AZ O-AMINOAZOTOLUENE (4-AMINO-2',3-DIMETHYLAZOBENZENE).
51.46AM-BI 4-AMINO-BIPHENYL AND ITS DERIVATIVES (4-ACETYLAMINO-BIPHENYL, 2-AMINODIPHENYLENE OXIDE, AND 3,2'-DIMETHYL-4-AMINODIPHENYL).
51.46AM-PH AMINOPHENOL.
51.46AM-ST 4-AMINOSTILBENE, AND ITS DERIVATIVES (4-ACETYLAMINOSTILBENE).
51.46AM-TR 3-AMINO-1,2,4-TRIAZOLE (3-AT).

51.46ANTHR ANTHRAMINE (2-AMINO-ANTHRACENE).
51.46ANTHR ANTHRANILIC ACID, 3-HYDROXY-.
51.46BENZA BENZ(A)ANTHRACENE (BA).
SEE ALSO: 51.46DMBA1 FOR DIMETHYL-BENZANTHRACENE.
51.46BENZA1 BENZANTHRACENE ANALOGS.
51.46BENZA101 7-METHYLBENZ(A)ANTHRACENE.
51.46BENZA102 12-METHYL-BENZ(A)ANTHRACENE.
51.46BENZI BENZIDINE (4,4'-DIAMINOBIPHENYL).
51.46BENZO 7,8-BENZOFLAVONE.
51.46BENZP 3,4-BENZPYRENE (BP).
51.46BENZY BENZYLCOUMARIN, AMINES DERIVED FROM IT.
51.46BERYL BERYLLIUM COMPOUNDS.
51.46BUTAN BUTANE, 1,4-DIMETHYLSULFONYLOXY-.
51.46BUTTE BUTTER YELLOW.
51.46BUTYR BETA-BUTYROLACTONE.
51.46CADMI CADMIUM SALTS.
51.46CARBA CARBAMATE, 1,1-DIPHENYL-2-PROPYNYL-N-CYCLOHEXYL- ANALOGS.
X 51.46CARBA CARBAMATES: SEE ALSO URETHANE.
51.46CARBO CARBON TETRACHLORIDE.
51.46CHLOR CHLORNAPHAZIN.
51.46CHLOR BIS(CHLOROMETHYL)ETHER.
51.46CHROM CHROMIUM COMPOUNDS.
51.46CITRU CITRUS RED 2.
51.46COBAL COBALT COMPOUNDS.
51.46CYCLO CYCLOHEXYLAMINE, N-HYDROXY-.
51.46DAB11 DAB (4-DIMETHYLAMINOAZOBENZENE, OR P-DIMETHYL-AMINOAZOBENZENE).
51.46DAB12 DAB ANALOGS.
51.46DAB1201 3'-METHL-4-DAB.
51.46DAB1202 P-FLUORO-DAB.
51.46DBAS- DBAS (DIMETHYLBENZANTHRACENE-ENDOSUCCINATE).
51.46DBA11 DBA (1,2,5,6-DIBENZANTHRACENE).
51.46DBA12 DBA ANALOGS.
51.46DBA1201 3'-METHYL-DBA.
51.46DBA1202 7,8,12-TRIMETHYL-BA.
51.46DEHYD 3-METHYL-1,2-DEHYDROCHOLANTHRENE.
51.46DENA- DENA (N,N-DIETHYLNITROSAMINE).
51.46DIAZA DIAZAANTHRENE.
51.46DIAZO DIAZOMETHANE.
51.46DIBEN DIBENZOFURAN, 2-METHOXY-3-AMINO (2-M-3-ADBF).
51.46DIBEN10 7H-DIBENZ(C,G)CARBAZOLE (7H-DBC).
51.46DIBEN20 DIBENZO(A,E)FLUORANTHENE.
51.46DIBEN50 DIBENZOPYRENES (DP).
51.46DICYC DICYCLOHEXYLAMINE.
51.46DIELD DIELDRIN.
51.46DIEPO20 1,2,3,4-DIEPOXYBUTANE (MESO FORM).
51.46DIEPO30 1,2,6,7-DIEPOXYHEPTANE.
51.46DIEPO40 1,2,5,6-DIEPOXYHEXANE.
51.46DIEPO50 1,2,7,8-DIEPOXYOCTANE.
51.46DIEPO60 1,2,4,5-DIEPOXYPENTANE.
51.46DIETH DIETHYLAMINE, N-NITROSO-.
51.46DIETH DIETHYLSTILBESTROL (DES).
51.46DIMET N,N-DIMETHYL-4-ANAZOBENZENE.
51.46DIMET DIMETHYLPHENYLTRIAZENE.
51.46DIOXA DIOXANE AND ITS ANALOGS (6-ACETOXY-2,4-DIMETHYL-M-DIOXANE).
51.46DMBA- 7,12-DIMETHYL-BENZ(A)ANTHRACENE.
51.46DMBA1 DMBA (9,10-DIMETHYL-1,2-BENZANTHRACENE OR 7,12-DIMETHYLBENZ(A)ANTHRACENE).
51.46DMBA2 DMBA ANALOGS.
51.46DMNA- DMNA (DIMETHYL NITROSAMINE OR N-NITROSODIMETHYLAMINE).
51.46ENS-- ENS (4-ETHYLSULFONYLNAPHTHALENE-1-SULFONAMIDE).
51.46EPOXI EPOXIDES, PEROXIDES AND THEIR DERIVATIVES (ETHYLENE OXIDE).
51.46EPOXY 1,2-EPOXYBUTENE-3.
51.46EPOXY 1,2-EPOXYHEXADECANE.
51.46ESTRA ESTRADIOL.
51.46ESTRO ESTROGEN.
51.46ETHIO ETHIONINE AND ITS ANALOGS (ETHIONINEETHANE AND ETHIONINE SULFOXIDE).
51.46ETHYL ETHYLDIAZOACETATE.
51.46ETHYL ETHYLENEDIAMINE, N,N-DINITROSO-.
51.46ETHYL ETHYLENEIMINE, N-ACETYL-.

51.46ETHYL ETHYLETHANE SULFONATE.
51.46ETHYL 1-ETHYLENEOXY-3,4-EPOXYCYCLOHEXANE.
51.46FAA-- 2,7-FAA (2,7-DIACETYLAMINOFLUORENE OR N,N'-2,7-FLUORENYLBISACETAMIDE).
51.46FANFT FANFT (N-(4-(5-NITRO-2-FURYL)-2-THIAZOLYL)FORMAMIDE OR FORMIC ACID, 2-(4-(5-NITRO-2-FURYL)-2-THIAZOLYL)HYDRAZIDE.
51.46FERRO FERROCENE.
51.46FLUOR N-2-FLUORENAMINE.
51.46FLUOR N-2-FLUORENYL-DIACETAMIDE.
51.46FPHTH FPHTHA (N-2-FLUORENYL-PHTHALAMIC ACID).
51.46FURAC FURACIN (5-NITRO-2-FURALDEHYDE SEMICARBAZONE).
51.46FURIU FURIUM (NFTA, N-(4-(5-NITRO-2-FURYL)-2-THIAZOLYL)ACETAMIDE).
51.46GLYCI GLYCIDALDEHYDE.
51.46GOLD- GOLD COMPOUNDS.
51.46GRISE GRISEOFULVIN.
51.46GUANI 7-HYDROXYGUANINE.
51.46GUANI GUANINE 3-N-OXIDE.
X 51.46HN2-- HN2: SEE NITROGEN MUSTARD.
51.46HYDR1 HYDRAZINE AND DERIVATIVES OF HYDRAZINE AND SEMICARBAZINE.
51.46HYDR111 HYDRAZINE SULFATE.
51.46IMFER IMFERON (IRON DEXTRAN).
51.46ISATI ISATIDINE.
51.46ISONI ISONIAZID.
51.46JACOB S. JACOBAEA LIN. ALKALOIDS.
51.46KYNUR KYNURENINE, 3-HYDROXY.
SEE ALSO BETA-BUTYROLACTONE.
51.46LASIO LASIOCARPINE.
51.46LEAD- LEAD COMPOUNDS.
51.46M-ANI N-METHYLANILINE.
51.46M-CHO 3-METHYLCHOLANTHRENE, 20-METHYLCHOLANTHRENE (MCA).
51.46M-ETH METHYL ETHER, ALPHA,ALPHA-DICHLOROMETHYL- (CMME).
51.46M-ETH METHYL ETHER, BISCHLORO- (BCME).
51.46M-MET METHYLMETHANE, N-NITROSO-N-.
51.46M-SUL METHYLSULFONIC ACID AND ITS ESTERS (METHANE SULFONATES) AND DERIVATIVES (METHYLMETHANE SULFONATE).
51.46MERCA 6-MERCAPTO-3-N-OXIDE.
51.46MESID MESIDINE.
51.46METHA METHANOL, METHYLAZOXY- (MAM).
X 51.46METHY METHYL COMPOUNDS: SEE 51.46M- AT END OF M'S.
51.46MIH-- MIH (N-ISOPROPYL-ALPHA-(2-METHYLHYDRAZINO)-P-TOLUAMIDE).
51.46MIREX MIREX.
51.46MK665 MK-665.
51.46MONOC MONOCHLOROACETALDEHYDE DIETHYL ACETAL.
51.46MORPH MORPHOLINE.
51.46N-BIP 4-NITROBIPHENYL.
51.46N-FLU 2-NITROFLUORENE.
51.46N-FUR NITROFURAN DERIVATIVES.
SEE ALSO FURIUM, FURACIN, AND FANFT.
51.46N-FUR11 3-(5-NITRO-2-FURYL)-6H-1,2,4-OXADIAZINE.
X 51.46N-GEN NITROGEN MUSTARD (HN2).
51.46N-OLE NITROOLEFINS (3-NITRO-3-HEXENE).
51.46N-QUI NITROQUINOLINE N-OXIDES.
SEE ALSO QUINOLINE OXIDES.
51.46N-QUI01 4-NITROQUINOLINE-6-CARBOXYLIC ACID-1-OXIDE.
51.46N-QUI02 4-NITROQUINOLINE 1-OXIDE (4-NQO).
51.46N-SA1 NITROSAMINES AND N-NITROSODIALKYLAMINES.
51.46N-SGE N-NITROSO-GUANIDINE, N-ETHYL-N'-NITRO- (ENG).
51.46N-SGM N-NITROSO-GUANIDINE, N-METHYL-N'-NITRO- (MNG).
51.46N-SMO N-NITROSOMORPHOLINE.
51.46N-SPI 1-NITROSOPIPERIDINE.
51.46N-SUB NITROSOUREA, BUTYL-.
51.46N-SUE NITROSOUREA, ETHYL-.
51.46N-SUM NITROSOUREA, METHYL- OR N-NITROSOMETHYLUREA.
51.46N-SUT N-NITROSOUREA, TRIMETHYL (N-NITROSOTRIMETHYLUREA).
51.46NAPT1 2-NAPTHYLAMINE (2-AMINO-NAPTHYLENE, 2-AMINO-1-NAPTHOL, OR BETA-NAPTHYLAMINE).
51.46NAPT2 NAPTHYLAMINE ANALOGS.
51.46NAPT211 3-METHYL DERIVATIVE OF 2-NAPTHYLAMINE.
51.46NAPT212 3-NITRO DERIVATIVE OF 2-NAPTHYLAMINE.
X 51.46NFTA- NFTA: SEE FURIUM.

51.46NICKE NICKEL ACETATE.
51.46NICKE NICKEL POWDER.
51.46NICKE NICKEL SULFIDE.
51.46NICKE NICKELOCENE.
X 51.46NITRO NITRO: SEE 51.46N- AT END OF N'S.
X 51.46NITRO NITROSO: SEE 51.46N-S AT END OF N'S.
X 51.46NITRO NITROSOUREA: SEE 51.46N-SU AT END OF N'S.
51.46OCTAD OCTADECANE, 7-N-HEXYL-.
51.46OXYTO OXYTOCIN.
51.46PARAS PARASORIC ACID.
51.46PENTA PENTAMETHYLENETETRAMINE, DINITROSO-.
51.46PHENA PHENANTHRENE, 2-ACETYLAMINO-.
51.46PHORB PHORBOL MYRISTATE ACETATE.
51.46PHYLA PHYLANE.
51.46PIPER PIPERAZINE, 1,4-DINITROSO-.
51.46PITYR PITYROL.
51.46PLAST PLASTICS AND PLASTIC FIBERS.
51.46PRIST PRISTANE.
51.46PROGE PROGESTERONE.
51.46PROPI PROPIOLACTONE, BETA-.
51.46PROPY PROPYL ETHER, OCTACHLORO-DI-N-.
51.46PROPY PROPYLENEDIAMINE, N,N-DIMETHYL-N,N-DINITROSO-.
51.46PYRRO PYRROLIZIDINE ALKALOIDS.
SEE ALSO LASIOCARPINE.
51.46QUINA QUINALDIC ACID, 8-HYDROXY-.
51.46QUINO QUINOLINE-1-OXIDE, 4-HYDROXYAMINO (HAQO).
51.46RETRO RETRORSINE.
51.46SACCH SACCHARIN.
51.46SAFRO SAFROLE (P-ALLYLMETHYLENEDIOXYBENZENE) AND ITS ANALOGS (1'-HYDROXY-SAFROLE).
51.46SELEN SELENIUM COMPOUNDS.
51.46SILVE SILVER COMPOUNDS.
51.46SQUAL SQUALANE.
51.46STERI STERIGMATOCYSTIN.
51.46STREP STREPTOZOTOCIN.
51.46STYRE STYRENE OXIDE.
51.46TANNI TANNIN EXTRACTS (TANNIC ACID).
51.46TDA-- 2,4-TDA.
51.46TEM-- TEM (TRIETHYLENE MELAMINE).
51.46THIOA THIOACETAMIDE.
51.46THIOU THIOUREA.
51.46TITAN TITANIUM DIOXIDE.
51.46TITAN TITANOCENE.
51.46TOLID O-TOLIDINE (OT).
51.46TOLUE O-TOLUENE.
51.46TOLUI P-TOLUIDENE, ALPHA-INDEN-1-YLIDENE-N-N-DIMETHYL-.
51.46TRYPT TRYPTOPHAN METABOLITES (3-HYDROXYKYNURENINE, 3-HYDROXYANTHRANILIC ACID, 8-HYDROXYQUINALDIC ACID).
51.46TSH-- TSH (THYROID STIMULATING HORMONE).
51.46URACI URACIL MUSTARD.
51.46URE11 URETHANE (ETHYL CARBAMATE).
51.46URE12 URETHANE DERIVATIVES. (SEE ALSO CARBAMATES).
51.46URE1211 URETHANE, N-NITROSO-N-METHYL-.
51.46VASOP VASOPRESSIN, ALPHA-HYDROXY-.
51.46VINYL VINYL CHLORIDE.
51.46VIOLE VIOLET #1.
51.46XAN11 XANTHINE, 3-HYDROXY.
51.46XAN12 XANTHINE, 7-HYDROXY-.
51.46XAN51 XANTHURENIC ACID, 8-METHYL ETHER.
51.46ZINC- ZINC COMPOUNDS.
51.4600 SELECTED TOPICS.
51.46001 GENERAL.
SEE ALSO: 51.45433 FOR SYNERGISTIC EFFECT OF CHEMICAL CARCINOGENS AND ONCOGENIC VIRUSES.
51.460011 HISTORY AND REVIEWS AND GENERAL ARTICLES.
51.460012 LIST OF AGENTS WHICH CAUSE CANCER.
51.460013 COMPOUNDS TESTED FOR CARCINOGENIC ACTIVITY WHICH DO CAUSE CANCER.
51.46002 MECHANISM OF ACTION OF CARCINOGENIC CHEMICALS (GENERAL).
SEE ALSO: 51.45542 FOR EFFECT OF CHEMICAL CARCINOGENS ON VIRUSES.
51.460021 GENERAL.

51.460022 PROTEIN BINDING AND NUCLEIC ACID BINDING AND OTHER CELL BINDING THEORIES AND EXPERIMENTS ON CARCINOGEN BINDING (GENERAL) AND BINDING OF CARCINOGENS OTHER THAN AROMATIC HYDROCARBONS.
SEE ALSO: 51.4601024 FOR PROTEIN-BINDING OF AROMATIC HYDROCARBONS.
SEE ALSO: 51.4602332 FOR PROTEIN BINDING OF AZO DYES.
51.460023 DELETION THEORIES: ROLE OF CARCINOGENS IN DELETING SOME CONTROLLING FACTOR.
SEE ALSO: 51.624 FOR ENZYME LEVELS IN TUMORS.
SEE ALSO: 51.62413 FOR ABSENCE OF FEEDBACK INHIBITION OF CHOLESTEROL BIOSYNTHESIS AND DOCUMENTED "DELETION" OF OTHER CONTROL MECHANISMS IN TUMORS.
SEE ALSO: 51.6234 FOR PROTEINS "DELETED" OR ABSENT FROM TUMORS.
SEE ALSO: 51.4600532 FOR LOSS OF PROTEINS (THE "H" PROTEIN) IN CARCINOGENESIS.
51.460024 POSSIBLE ROLE OF FREE RADICALS AND OTHER MECHANISMS IN CHEMICAL CARCINOGENESIS.
51.460024 METABOLISM OF CARCINOGENS (GENERAL).
51.460025 SELECTIVE RESISTANCE OF CANCER CELLS TO CARCINOGENS.
51.460025 MISCELLANEOUS STUDIES.
51.46002501 RELATION OF TERATOGENESIS AND CARCINOGENIC EFFECTS.
SEE ALSO: 51.5155 FOR DEDIFFERENTIATION OR "CONVERGENCE" OF CANCER CELLS.
51.46003 PHYSICAL CHEMICAL STUDIES OF CARCINOGENIC COMPOUNDS.
ELECTRONIC STRUCTURE AND ELECTRON SPIN (PARAMAGNETIC) RESONANCE OR NUCLEAR MAGNETIC RESONANCE.
SEE ALSO: 51.4601025 FOR PHYSICAL CHEMICAL STUDIES OF AROMATIC HYDROCARBONS.
COMPLEX FORMATION (CHARGE TRANSFER COMPLEXES).
51.46004 METHODOLOGY; METHODS OF MEASURING CARCINOGENICITY OF COMPOUNDS AND SCREENING FOR CARCINOGENIC COMPOUNDS.
METHODS OF DETECTION OF CARCINOGENS IN THE ENVIRONMENT AND ELSEWHERE.
DOSAGE RATES AND OTHER FACTORS.
51.460041 GENERAL.
51.460042 IN VIVO STUDIES AND ROUTES OF CARCINOGEN ADMINISTRATION.
51.4600421 GENERAL.
51.4600422 IN NEWBORN ANIMALS.
51.4600423 TRANSPLACENTAL TUMOR INDUCTION.
51.4600424 LACTATIONAL INDUCTION OF TUMORS.
51.4600425 CARCINOGENESIS IN GERM-FREE ANIMALS.
51.460043 IN VITRO STUDIES.
EFFECTS OF CARCINOGENS ON TISSUE CULTURES AND METABOLISM OF CARCINOGENS BY TISSUE CULTURE CELLS AND ORGAN CULTURE.
CHEMICAL CARCINOGENESIS IN ORGAN CULTURE.
51.460044 METHODS FOR STUDYING UPTAKE, TUMOR DISTRIBUTION, INTRACELLULAR LOCALIZATION, AND EXCRETION OF CARCINOGENS.
51.460045 METHODS OF SCREENING FOR CARCINOGENIC AGENTS.
51.46005 CARCINOGEN-HOST INTERACTIONS; CELL TRANSFORMATION INDUCED BY CHEMICAL CARCINOGENS.
SEE ALSO: 51.45006 FOR EFFECT OF CARCINOGENIC VIRUSES ON HOST CELLS.
SEE ALSO: 51.514 FOR MALIGNANT TRANSFORMATIONS (GENERAL).
SEE ALSO: 51.411 FOR GENERAL HOST FACTORS (AGE, NUTRITION, DIET, SEX) RELATED TO CARCINOGENESIS.
SEE ALSO: 51.415 TO 51.409 FOR EFFECT OF CARCINOGENS ON SPECIFIC ORGAN SYSTEMS AND TISSUES.
51.460051 GENERAL.
51.4600511 EFFECT OF CHEMICAL CARCINOGENS ON TISSUES AND ON HOSTS (GENERAL).
51.4600512 EFFECT OF CHEMICAL CARCINOGENS ON SUB-CELLULAR PARTICLES AND ON CELL COMPONENTS AND CONSTITUENTS (GENERAL).
EFFECT ON LYSOSOMES.
SEE ALSO: 51.460022 FOR PROTEIN-BINDING OF CARCINOGENS.
51.4600513 EFFECT OF AGE ON HOST RESPONSE; EFFECT ON NEONATAL RATS AND HAMSTERS.
SEE ALSO: 51.41144 FOR EFFECT OF AGE ON CARCINOGENESIS IN GENERAL.
51.460052 EFFECTS OF CHEMICAL CARCINOGENS ON CELL CYTOLOGY (INCLUDING CHROMOSOMES).
EFFECT ON N/CP RATIO AND OTHER CELL PARTICLES.
CHROMOSOME NUMBER IN CHEMICALLY INDUCED TUMORS.
BINDING TO SPECIFIC PARTS OF CELLS.
INTRACELLULAR DISTRIBUTION OF CARCINOGENS.
EFFECT OF CHEMICAL CARCINOGENS ON MORPHOLOGY AND CELL DIVISION, OR DIFFERENTIATION.

EFFECT OF CHEMICAL CARCINOGENS ON NUCLEOLI AND THEIR MORPHOLOGY.
EFFECT OF CHEMICAL CARCINOGENS ON CHROMOSOMES, CHROMOSOME MORPHOLOGY, AND CHROMOSOME NUMBER.
OTHER EFFECTS OF CHEMICAL CARCINOGENS ON NUCLEI AND THEIR MORPHOLOGY.
OTHER EFFECTS OF CHEMICAL CARCINOGENS ON MITOCHONDRIA AND THEIR MORPHOLOGY.
OTHER EFFECTS OF CHEMICAL CARCINOGENS ON MICROSOMES AND THEIR MORPHOLOGY.
OTHER EFFECTS OF CHEMICAL CARCINOGENS ON RIBOSOMES AND THEIR MORPHOLOGY.
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51.51403 ULTRASTRUCTURE OF CELLS INDUCING DESTRUCTION BY CHEMOTHERAPEUTIC AGENTS OR IMMUNITY OR RADIATION OR OTHER AGENTS.
51.5141 GENERAL.
51.51411 OPEN.
51.51412 ULTRASTRUCTURE TO OTHER CYTOLOGY OF NUCLEI AND NUCLEOLI IN CANCER CELLS.
51.51413 ULTRASTRUCTURE AND OTHER CYTOLOGY OF MITOCHONDRIA IN CANCER CELLS.
51.51414 ULTRASTRUCTURE AND OTHER CYTOLOGY OF MICROSOMES AND ENDOPLASMIC RETICULUM.
51.51415 MEMBRANES.
51.51416 OTHER STRUCTURES.
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51.5141602 FILAMENTOUS STRUCTURES IN CANCER CELLS AND ADJACENT CELLS.
51.51422 ULTRASTRUCTURE OF HEART TUMORS.
51.51425 ULTRASTRUCTURE OF LEUKEMIA AND LYMPHOMA.
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51.514252 ULTRASTRUCTURE OF LEUKEMIA.
51.514253 ULTRASTRUCTURE OF LYMPHOMA.
51.514254 ULTRASTRUCTURE OF OTHER RETICULOENDOTHELIAL DISEASES. HISTOCYTOSIS.
51.5143 ULTRASTRUCTURE OF MUSCLE CANCER.
51.5144 ULTRASTRUCTURE OF KIDNEY CANCER.
51.51451 USTRASTRUCTURE OF EXOCRINE GLAND CANCER.
51.51452 ULTRASTRUCTURE OF LUNG CANCER.
51.51453 ULTRASTRUCTURE OF LIVER CANCER.
51.51454 ULTRASTRUCTURE OF STOMACH CANCER AND OTHER GASTROINTESTINAL TRACT CANCER.
51.5145524 ULTRASTRUCTURE OF BREAST CANCER.
51.5145525 ULTRASTRUCTURE OF ENDOMETRIAL CANCER (INCLUDING CHORIOCARCINOMA AND TROPHOBLASTIC CANCER).
51.5145532 ULTRASTRUCTURE OF TESTIS CANCER.
51.5145534 ULTRASTRUCTURE OF PROSTATE CANCER.
51.514554 ULTRASTRUCTURE OF GERM CELLS AND TERATOMAS.
51.51456 ULTRASTRUCTURE OF ENDOCRINE GLAND CANCER.
51.514565 ULTRASTRUCTURE OF ADRENAL GLAND CANCER.
51.51462 ULTRASTRUCTURE OF NERVE CANCER.
51.51465 ULTRASTRUCTURE OF BRAIN CANCER.
51.5147 ULTRASTRUCTURE OF CANCER INVOLVING THE EYES AND EARS.
51.51482 ULTRASTRUCTURE OF CONNECTIVE TISSUE CANCER AND MESENCHYME.
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51.514822 ULTRASTRUCTURE OF FIBROUS CONNECTIVE TISSUE CANCER.
51.51483 ULTRASTRUCTURE OF SKIN CANCER.
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51.515 BROAD CLASSES OF TUMORS.
TUMOR TYPES NOT LIMITED TO SPECIFIC ORGAN SYSTEMS.
TUMOR MORPHOLOGY AND PATHOLOGY.
SEE ALSO: 52.52 TO 52.58 FOR TUMORS OF SPECIFIC ORGAN SYSTEMS.
SEE ALSO: 51.594 FOR METASTASES IN GENERAL.
51.515A1 ADENOMAS AS A CLASS OF TUMORS.
51.515A1Y1 YOSHIDA ASCITES.
51.515A2 ASCITES CELLS AND ASCITES TUMORS.
SEE ALSO: 51.577 FOR EFFECT OF ASCITES TUMORS ON THE HOST.
51.515A281 BERGEN A FOR ASCITES CARCINOMA IN MICE.

51.515A2E1 EHRLICH ASCITES TUMORS.
51.515A2L1 LANDSCHUTZ ASCITES CELLS.
51.515A2N1 NOVIKOFF ASCITES CELLS.
51.515A211 CYTOLOGY AND HISTOLOGY OF ASCITES CELLS.
51.515A212 CONVERSION OF TUMORS TO THE ASCITES FORM.
51.515A213 CELL DIVISION AND GROWTH KINETICS OF ASCITES CELLS.
51.515B1 BENIGN TUMORS AS A CLASS.
51.515C1 CARCINOMAS.
51.515H1 HELA CELLS.
51.515L1 L-M CELLS.
51.515M1 MELANOMAS: SEE 51.5832 FOR ALL INFORMATION.
51.515M2 MYXOMAS.
51.515P1 PLASMA CELL TUMORS AS A CLASS: SEE 51.525 FOR ALL INFORMATION.
51.515S1 SARCOMAS: LIST MOST INFORMATION AS 51.5822
SEE ALSO: 51.52533 FOR RETICULAR CELL SARCOMAS.
51.515S1S1 SARCOMA I.
51.515S1S180 SARCOMA 180.
51.515S11 CYTOLOGY, HISTOLOGY, PATHOLOGY AND METHODS FOR CLASSIFICATION OF SARCOMAS.
51.515S2 SPONTANEOUS TUMORS AS A CLASS.
51.51500 GENERAL.
51.515001 OPEN.
51.515002 CLASSIFICATION OF TUMORS AND DESCRIPTIONS AND DEFINITIONS OF CANCER STAGES.
51.515003 TUMOR REGISTRIES AND TUMOR BANKS AND LISTS AND INVENTORIES OF TUMORS STORED.
51.515031 GENERAL.
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51.516 SPECIFIC SUB-CELLULAR FRACTIONS OF TUMOR CELLS AND RELATED ISOLATION METHODS.
SEE ALSO: 51.437 FOR PRE-CANCEROUS PATHOLOGY OF SPECIFIC TISSUES.
SEE ALSO: 51.458 FOR MICROORGANISMS PRESENT IN TUMORS (OTHER THAN VIRUSES).
SEE ALSO: 51.45 FOR VIRUSES PRESENT IN TUMORS.
SEE ALSO: 51.67 FOR BIOCHEMISTRY OF THESE FRACTIONS.
SEE ALSO: 51.514 FOR ULTRASTRUCTURE OF TUMORS.
51.5161 TUMOR CYTOLOGY AND SUBCELLULAR STRUCTURE IN GENERAL.
51.51611 METHODS FOR ISOLATION AND SEPARATION OF TUMOR CELLS.
USE OF DENSITY GRADIENTS.
51.51612 ISOLATION OF SUB-CELLULAR PARTICLES FROM TUMORS (GENERAL).
51.51613 CHEMICAL COMPOSITION OF SUB-CELLULAR PARTICLES IN GENERAL.
51.5162 TUMOR CELL MEMBRANES (INCLUDING EPITHELIAL BASEMENT MEMBRANE(EBM) AND PLASMA CELL MEMBRANES) AND THEIR PROPERTIES.
SEE ALSO: 51.742406 FOR AGGLUTINATION OF INJECTED TUMOR CELLS.
SEE ALSO: 51.743407 FOR IMMUNOLOGY OF TUMOR CELL MEMBRANES.
SEE ALSO: 51.5116 FOR CLONES GROWN IN TISSUE CULTURE AND INTERACTION BETWEEN CELLS IN VITRO.
SEE ALSO: 47.85335 FOR ANTIGENICITY OF CELL MEMBRANES.
SEE ALSO: 43.43 FOR PROPERTIES OF CELL MEMBRANES IN NON-CANCER CELLS.
SEE ALSO: 51.734 FOR INVASIVENESS OF TUMOR CELLS.
SEE ALSO: 47.3252 FOR CONTACT INTERACTIONS BETWEEN IMMUNE AND TARGET CELLS.
SEE ALSO: 51.7332 FOR COHESIVENESS OF TUMOR CELLS.
SEE ALSO: 51.5114 FOR ROLE OF MEMBRANES IN CONTACT INHIBITION IN TUMOR CELLS.
SEE ALSO: 51.743407 FOR SURFACE ANTIGENS OF TUMORS.
SEE ALSO: 43.43 FOR INTERACTION BETWEEN CELLS IN GENERAL.
SEE ALSO: 51.51627 FOR SPECIFIC TYPES OF MEMBRANES.
51.51621 GENERAL.
51.516211 ISOLATION OF TUMOR CELL MEMBRANES AND OTHER METHODS USED TO STUDY TUMOR CELL MEMBRANES.
51.51622 CELL CONTACT RELATIONSHIPS OF TUMOR CELLS.
STICKINESS, ADHESIVENESS, AND COHESIVENESS OF CANCER CELLS.
SEE ALSO: 51.51162 FOR ASSOCIATION AND AGGREGATION OF CANCER CELLS IN VITRO.
SEE ALSO: 51.7424 FOR AGGLUTINATION OF CANCER CELLS.
51.51623 SURFACE CHARGES OF TUMOR CELLS.
51.516231 GENERAL.
51.516232 ELECTROPHORETIC MOBILITY OF CANCER CELLS.
51.51624 PERMEABILITY OF TUMOR CELL MEMBRANES.
51.51625 COMPOSITION, METABOLISM, AND ENZYME CONTENT OF TUMOR CELL MEMBRANES.
51.516251 GENERAL.

51.516252 GLYCOLIPIDS OF TUMOR MEMBRANES.
51.51626 MORPHOLOGY OF TUMOR CELL MEMBRANES AND BASEMENT MEMBRANES.
51.51627 SPECIFIC TYPES OF MEMBRANES.
51.5162701 BASEMENT MEMBRANES.
51.5164 TUMOR AND SUB-CELLULAR PARTICLES IN TUMOR CYTOPLASM.
51.51640 GENERAL.
51.516401 GENERAL ASPECTS OF TUMOR CELL CYTOPLASM AND ITS ORGANIZATION AND COMPOSITION.
51.51641 TUMOR MITOCHONDRIA AND INTRAMITOCHONDRIAL BODIES.
51.51642 TUMOR MICROSOMES, RIBOSOMES, POLYSOMES AND ENDOPLASMIC RETICULUM.
SEE ALSO: 51.6232 FOR STUDIES OF RIBOSOMES AND POLYRIBOSOMES AS RELATED TO PROTEIN SYNTHESIS IN TUMORS AND TUMOR-BEARING HOSTS.
51.51643 TUMOR LYSOSOMES.
51.51644 GRANULES AND PARTICLES AND INCLUSION BODIES IN TUMOR CELLS.
51.5164401 FERRITIN-LIKE GRANULES.
51.5164402 MAST CELL GRANULES.
51.5164403 MACROMOLECULAR CRYSTALS, MEGAMOLECULES, AND OTHER PARTICLES.
SEE ALSO: 51.51662 FOR EXTRACELLULAR CRYSTALS.
51.5164404 MISCELLANEOUS CYTOPLASMIC INCLUSION BODIES.
51.51645 INTRACELLULAR TUBULES.
51.51646 GOLGI APPARATUS.
51.5165 TUMOR CELL NUCLEI AND THEIR CONTENTS.
SEE ALSO: 51.5112 FOR CANCER CELL DIVISION AND MITOSIS.
SEE ALSO: 51.512 FOR TUMOR CHROMOSOMES AND CHROMOSOME ABNORMALITIES.
SEE ALSO: 51.51123 FOR MULTINUECLEATION AND ENDOREPLICATION IN CANCER CELLS.
51.51651 GENERAL.
51.516511 ISOLATION OF TUMOR CELL NUCLEI.
51.516512 FINE STRUCTURE OF TUMOR CELL NUCLEI, GENERAL.
51.516513 DEVELOPMENTAL POTENTIALITIES OF TUMOR NUCLEI AND RELATED NUCEAR TRANSPLANTATION EXPERIMENTS.
51.516514 CYTOLOGY, HISTOLOGY, CYTOCHEMISTRY AND ULTRASTRUCTURE OF TUMOR CELL NUCLEI AND CHROMATIN.
51.516515 BIOCHEMISTRY OF TUMOR CELL NUCLEI.
51.51652 TUMOR CELL NUCLEOLI.
51.516521 GENERAL.
51.516522 MORPHOLOGY, CYTOLOGY, AND HISTOCHEMISTRY OF TUMOR CELL NUCLEOLI.
51.516523 BIOCHEMISTRY OF TUMOR CELL NUCLEUS.
51.51653 NUCLEAR SAP.
51.5166 OTHER CANCER TISSUE COMPONENTS AND RELATED PHENOMENA.
51.51661 GENERAL.
51.51662 EXTRACELLULAR CRYSTALS AND OTHER STRUCTURES OF TUMOR TISSUES.
SEE ALSO: 51.5164403 FOR INTRACELLULAR CRYSTALS.
51.518 GENERAL CANCER CYTOLOGY NOT INCLUDED ABOVE.
SEE ALSO: 51.513 FOR HISTOCHEMISTRY AND CYTOCHEMISTRY.
SEE ALSO: 51.514 FOR FINE STRUCTURE AND ULTRASTRUCTURE STUDIES.
51.5181 GENERAL.
51.5182 UNUSUAL ASPECTS AND STRUCTURES IN CANCER TISSUES.
SEE ALSO: 51.51644 FOR UNUSUAL GRANULES, CRYSTALS, INCLUSION BODIES, PARTICLES, ETC,.
51.5183 STUDIES OF SPECIFIC CELL TYPES (MAST CELLS) IN CANCER.
51.5184 CYTOLOGY OF NORMAL CELLS AND TISSUES NEAR TUMORS AND THEIR INTERACTION WITH TUMOR CELLS.

NOTE: THE FOLLOWING CLASSES (51.52-51.59) DEAL WITH CANCER OF SPECIFIC ORGAN SYSTEMS IN MAN AND OTHER MAMMALS.

51.52 CANCER OF THE CARDIOVASCULAR, LYMPHATIC AND RETICULOENDOTHELIAL SYSTEM.
51.522 CARDIAC CANCER.
51.5221 GENERAL.
51.5222 LEIOMYOSAREOMAS OF THE HEART.
51.5223 MYXOMAS OF THE HEART.
51.524 CANCER OF THE VASCULAR SYSTEM AND RELATED TISSUES.
51.5241 GENERAL.
51.5242 ANGIOMAS, HEMANGIOMAS, AND HEMANGIOENDOTHELIOMAS.
51.5243 OPEN.
51.525 TUMORS OF THE LYMPHATIC, LYMPHOID AND RETICULOENDOTHELIAL SYSTEM: LEUKEMIAS AND LYMPHOMAS.
SEE ALSO: 51.22025 FOR CLINICAL TREATMENT OF LEUKEMIA WITH CHEMOTHERAPEUTIC AGENTS.

51.5251 GENERAL.
51.5252 HUMAN LEUKEMIA.
SEE ALSO: 51.5253 FOR HUMAN LYMPHOMAS.
SEE ALSO: 51.40252 FOR ********** OF HUMAN LEUKEMIA.
SEE ALSO: 51.4525 FOR VIROLOGY OF HUMAN LEUKEMIA.
SEE ALSO: 52.25 FOR PRE LEUKEMIC CONDITIONS AND MYELUID METAPLASIAS.
SEE ALSO: 51.75252 FOR FACTORS OF CANCER ON LEUKOCYTES.
51.52521 GENERAL.
51.52522 STUDIES OF HUMAN LEUKEMIC CELLS.
SEE ALSO: 51.47541 FOR EFFECT OF LEUKOCYTES AND OTHER RETICULOENDOTHELIAL CELLS ON CANCER CELLS.
SEE ALSO: 51.75252 FOR EFFECT OF CANCER ON PROPERTIES OF LEUKOCYTES AND OTHER RETICULOENDOTHELIAL CELLS.
51.525221 GENERAL.
51.5252211 ISOLATION OF LEUKEMIC CELLS.
51.5252212 METHODS OF CULTURING HUMAN KEUKEMIC CELLS.
SEE ALSO: 53.25 FOR TISSUE CULTURE OF NORMAL LYMPHOCYTES.
51.5252213 ASSAYS FOR LEUKEMIC CELLS.
51.52522131 SPLEEN COLONY ASSAY METHODS.
51.525222 IN VIVO STUDIES OF HUMAN LEUKEMIC CELLS (GENERAL).
SEE ALSO: 51.75252 FOR EFFECTS OF TUMORS ON NORMAL LEUKOCYTES.
SEE ALSO: 53.252 FOR STUDIES OF NORMAL LEUKOCYTE KINETICS.
51.5252221 GENERAL.
51.5252222 KINETICS OF HUMAN LEUKEMIC CELL PRODUCTION AND RATE OF LEUKEMIC CELL DIVISION.
SEE ALSO: 51.5112 FOR RATE OF TUMOR CELL DIVISION IN GENERAL.
51.5252223 INVASIVENESS OF LEUKEMIC CELLS.
51.525223 KINETICS OF HUMAN LEUKEMIC CELL DIVISION IN VITRO.
51.52522371 MEMBRANE TRANSPORT IN HUMAN LEUKEMIC CELLS.
51.52522372 PHAGOCYTOSIS BY HUMAN LEUKEMIC CELLS.
51.5252238 OTHER PROPERTIES OF HUMAN LEUKEMIC CELLS.
51.525224 EFFECT OF VARIOUS AGENTS (PHYTOHEMAGGLUTININ) ON LEUKEMIC CELLS.
51.525225 CHROMOSOMES OF HUMAN LEUKEMIC CELLS.
SEE ALSO: 51.512 FOR TUMOR CELL CHROMOSOMES AND CHROMOSOME ABNORMALITIES ASSOCIATED WITH CANCER IN GENERAL.
51.52522501 GENERAL.
51.52522502 THE PH1 CHROMOSOME (PHILADELPHIA CHROMOSOME).
51.52522503 DIFFICIENCY OF CHROMOSOME 21 IN CHRONIC MYELOGENOUS LEUKEMIA.
51.525226 OTHER CYTOLOGICAL AND CYTOCHEMICAL STUDIES OF HUMAN LEUKEMIC CELLS.
51.5252261 GENERAL.
51.5252262 MITOCHONDRIA.
51.5252263 MICROSOMES.
51.5252264 LYSOSOMES.
51.5252265 OTHER CYTOPLASMIC STRUCTURES.
51.5252266 NUCLEI AND NUCLEOLI.
51.525227 BIOCHEMISTRY AND METABOLISM OF HUMAN LEUKEMIC CELLS.
51.5252271 NUCLEIC ACIDS, BIOCHEMISTRY AND METABOLISM.
51.5252272 PROTIEN, BIOCHEMISTRY AND METABOLISM.
51.5252273 LIPID, BIOCHEMISTRY AND METABOLISM.
51.5252274 CHO BIOCHEMISTRY AND METABOLISM (INCLUDING GLYCOLYSIS, RESPIRATION, 02 UPTAKE KREBS CYCLE).
51.5252275 VITAMINS.
51.5252277 ENERGY PRODUCTION AND STORAGE AND ELECTRON TRANSPORT.
51.52523 SPECIFIC TYPES OF HUMAN LEUKEMIA.
SEE ALSO: 51.40252653 FOR CONGENITAL LEUKEMIA.
51.525231 GENERAL.
51.5252311 ACUTE LEUKEMIA IN GENERAL.
STEM CELL OR BLAST CELL LEUKEMIA.
51.5252312 CHRONIC LEUKEMIA IN GENERAL.
51.5252313 SUB-LEUKEMIC LEUKEMIA (OR ALEUKEMIC LEUKIMIA) IN GENERAL OF GRANULOCYTIC, MONOCYTIC, OR LYMPHOCYTIC TYPES.
51.5252314 COMPOUND LEUKEMIAS.
51.525232 LYMPHOCYTIC LEUKEMIAS (LYMPHATIC, LYMPHOBLASTIC, LYMPHOGENOUS, AND LYMPHOID LEUKEMIAS ).
51.5252321 GENERAL.
51.5252322 ACUTE LYMPHOCYTIC LEUKEMIAS.
LYMPHOBLASTIC LEUKEMIA.
51.5252323 CHRONIC LYMPHOCYTIC LEUKEMIAS.
51.525233 MYELOCYTIC OR GRANULOCYTIC LEUKEMIAS (MYELOCYTIC, EOSINOPHILIC, BASOPHILIC, AND MYELOID LEUKEMIAS) AND "MYELOSIS).

51.5252331 GENERAL.
51.5252332 ACUTE GRANULOCYTIC LEUKEMIA.
ACUTE MYELOGENOUS LEUKEMIA.
MYELOBLASTIC LEUKEMIA.
PROMYELOBLASTIC MYELOCYTIC MYELOSIS.
51.525234 MONOCYTIC LEUKEMIAS (MONOBLASTIC AND HISTIOCYTIC TYPES).
SEE ALSO: 51.52252333 FOR NAEGELI TYPE OF MONOCYTIC LEUKEMIA.
51.5252341 GENERAL: SCHILLING TYPE MONOCYTIC LEUKEMIA.
HISTIOCYTIC LEUKEMIA.
51.5252342 ACUTE MONOCYTIC LEUKEMIA.
MONOBLASTIC LEUKEMIA.
51.5252343 CHRONIC MONOCYTIC LEUKEMIA.
EFFECT OF LEUKEMIA ON HOST IMMUNITY.
51.525235 LEUKEMIAS AND RELATED CONDITIONS INVOLVING INCREASED ERYTHROCYTE LEVELS.
SEE ALSO: 51.7526 FOR TUMOR-INDUCED ERYTHROPOIESIS.
SEE ALSO: 51.5263 FOR ERYTHREMIA (POLYCYTHEMIA RUBRA, OR POLYCYTHEMIA VERA).
51.5252351 GENERAL.
51.5252352 ERYTHROLEUKEMIA (ERYTHROCYTHEMIA).
51.5252353 ERYTHREMIC MYELOSIS (DIGUGLIELMO'S DISEASE).
51.525236 OTHER LEUKEMIC CONDITIONS.
51.52523601 BASOPHILIC LEUKEMIA.
51.52523602 EOSINOPHILIC LEUKEMIA.
51.52523603 LYMPHOSARCOMA CELL LEUKEMIA (LEUKOSARCOMA OF STERNBERG).
51.52523604 GIANT CELL LEUKEMIA:
MEGAKARYOCYTIC (MEGAKARYOBLASTIC) LEUKEMIA.
MEGAKARYOCYTIC MYELOSIS.
THROMBOCYTIC LEUKEMIA.
51.52523605 PLASMA CELL LEUKEMIA (PLASMACYTIC LEUKEMIA).
51.52523606 CHLOROMA AND CHLOROLEUKEMIA.
51.52523607 MAST CELL LEUKEMIA.
51.52524 SPECIFIC EFFECTS OF LEUKEMIA ON PATIENTS.
SEE ALSO: 51.75 FOR EFFECT ON SPECIFIC TISSUES.
SEE ALSO: 51.74632 FOR DECREASED I-ANTIGEN IN LEUKEMIC PATIENTS.
SEE ALSO: 51.7525 FOR EFFECT OF TUMORS (GENERAL) ON THE RETICULO-ENDOTHELIAL AND LYMPHATIC SYSTEM AND RELATED CELLS.
SEE ALSO: 51.76183 FOR THE "HYPOTHALAMIC SYNDROME" (OBESITY, HIRSUTISM) IN LEUKEMIC PATIENTS.
SEE ALSO: 51.755663 FOR TESTICULAR INFILTRATION BY LEUKEMIC CELLS.
51.525241 GENERAL.
51.525242 SPLENOMEGALY IN LEUKEMIA.
51.525243 PROPERTIES OF SERUM FROM PATIENTS WITH LEUKEMIA.
STIMULATION OF MARROW-LIKE SINUSOIDS IN CULTURES OF LYMPHOCYTES GROWN IN LEUKEMIC SERUM.
51.525244 RESISTANCE TO INFECTION IN LEUKEMIC PATIENTS.
51.525245 EFFECT ON NORMAL TISSUES (MUSCLE).
51.5253 HUMAN LYMPHOMAS AND RELATED DISEASES (ACS MANUAL, 1951).
SEE ALSO: 51.4525 FOR ALL VIROLOGICAL ASPECTS.
SEE ALSO: 51.65 FOR VITAMIN B12-LIKE ACTIVITY IN SERUM OF PATIENTS WI
SEE ALSO: 51.752632 FOR STIMULATION OF HEMAPOIETIC TISSUE BY SERUM FROM PATIENTS WITH LEUKEMIA.
SEE ALSO: 51.5254 FOR PRELYMPHOMATOSIS.
51.525304 PRIMARY OSSEOUS LYMPHOGRANULOMA.
51.52531 GENERAL.
51.525312 CHROMOSOMES OF HUMAN LYMPHOMAS.
51.525313 RATE OF DIVISION AND GROWTH RATE OF LYMPHOMA CELLS IN TISSUE CULTURE AND IN VITRO.
51.52532 LYMPHOSARCOMAS.
51.525321 GENERAL.
51.525322 BURKITT'S AFRICAN LYMPHOMA.
SEE ALSO: 51.4502 FOR VIROLOGICAL ASPECTS.
51.525323 BURKITT-LIKE LYMPHOMAS (NON-AFRICAN).
51.525324 OCULAR LYMPHOMA AND LYMPHOMA OF THE ORBIT.
51.525325 LYMPHOSARCOMATOSIS.
51.525326 MYCOSIS FUNGOIDES.
51.52533 RETICULUM CELL SARCOMAS:
RETICULOSIS AND RETOTHELOSARCOMA (SC).
GRANULOMATOUS RETICULOSIS.
RETICULOSARCOMA OF BONE.
SEE ALSO: 51.52563 FOR REDUCTION OF CELL NUCE
SEE ALSO: 51.52563 FOR REDUCTION OF CELL NUCLEIC ACID LIKE HODGKINS DISEASE IN SJL/J MICE.

RETICULOENDOTHELIOMA.
HODGKINS SARCOMA.
HODGKINS LYMPHORETICULOMA.
SYNCYTIAL RETICULOSARCOMA.
HISTIOCYTIC SARCOMA.
ENDOTHELIOMAS OF LYMPH GLANDS AND LYMPH NODES.
51.52534 HODGKINS DISEASE AND CLOSELY RELATED CONDITIONS.
LYMPHOCYTE DEFECTS AND OTHER IMMUNE CHANGES RELATED TO HODGKINS DISEASE.
STERNBERGS DISEASE (STERNBERG-REED OR REED-STERNBERG CELLS).
HODGKINS GRANULOMA AND PARAGRANULOMA.
HODGKINS LYMPHOBLASTOMA.
HODGKINS LYMPHOMA.
LYMPHOGRANULOMA AND LYMPHOGRANULOMATOSIS.
SPIEGLER-FENDT SARCOID.
PEL EBSTEIN DISEASE.
51.52535 PLASMA CELL MYELOMA AND MULTIPLE MYELOMA.
BONE MARROW NEOPLASMS IN GENERAL.
MYELOMATOSIS.
MULTIPLE MYELOMA.
PLASMOCYTIC MYELOMA.
LYMPHOCYTIC MYELOMA.
PLASMOCYTIC SARCOMA.
PLASMACYTOMA.
MYELOSARCOMA.
MYELOMAS.
KAHLER'S DISEASE.
SEE ALSO: 51.6233 FOR BIOCHEMISTRY AND PROPERTIES OF PLASMA-CELL TUMOR, MYELOMA, AND BENCE-JONES PROTEINS.
51.52536 THYMOMAS AND OTHER THYMUS TUMORS.
SEE ALSO: 52.323 FOR MYASTHENIA GRAVIS AND RELATED ABNORMALITIES IN PATIENTS WITH PRIMARY THYMUS TUMORS.
51.52537 OTHER LYMPHOMAS:
51.5253701 GIANT FOLLICULAR LYMPHOMA (NODULAR LYMPHOMA, FOLLICULAR SARCOMA, BRILL SYMMERS DISEASE).
51.5253702 BENIGN LYMPHOID POLYP.
51.5253703 COMPOUND LYMPHOMAS.
51.5253705 TRANSPLANTABLE HUMAN LYMPHOMAS.
51.525401 GENERAL.
51.525403 "HISTIOCYTOSIS X" OR LETTERER-SIWE DISEASE OR HAND-SCHULLER-CHRISTIAN DISEASE OR NON-LIPID RETICULOENDOTHELIOSIS AND RELATED EOSINOPHILIC GRANULOMA.
51.525404 ANGIOMATOUS LYMPHOID HAMARTOMA (LYMPH NODE HYPERPLASIA).
FOLLICULAR LYMPHORETICULOMA.
HEMANGIOLYMPHOMA.
LYMPH NODE HYPERPLASIA.
51.525405 SPLEEN TUMORS.
51.525406 LYMPH NODE METASTASIS OF OTHER TUMORS.
51.52551 GENERAL.
51.5255102 LEUKEMIA IN CATTLE.
51.5255123 IMMUNE COMPETENCE OF LEUKEMIC MICE.
SEE ALSO: 51.746 FOR EFFECTS OF CANCER ON HOST IMMUNITY.
51.52552 NON-VIRAL ASPECTS OF LEUKEMIA IN MICE.
SEE ALSO: 51.4523 FOR ALL MURINE LEUKEMIA VIRUSES AND THE DISEASES THEY INDUCE AND ALL ASPECTS OF VIRAL MURINE LEUKEMIA.
51.525521 GENERAL.
51.525522 STRAINS OF MICE WITH HIGH INCIDENCE OF LEUKEMIA.
PRELEUKEMIC STATES IN THESE MICE.
LEUKEMIA IN C58 MICE (THE IB LINE).
LEUKEMIA IN C57/BL MICE.
51.525523 CHARACTERISTICS OF LEUKEMIC ANIMALS AND LEUKEMIC CELLS IN ANIMALS.
51.5255231 GENERAL; CYTOLOGICAL AND HISTOLOGICAL STUDIES.
51.5255232 PROPERTIES OF LYMPHOCYTES IN LEUKEMIC MICE.
51.5255233 EFFECT OF LEUKEMIA ON MICE.
ERYTHROLEUKEMIC REACTION (INCREASED NORMOBLASTS IN SPLEEN AND BLOOD).
METABOLIC CHANGES (SERUM GLUCOSE LEVELS, EFFECT OF ALLOXAN).
51.5255248 WHEN THYMUS IS DIRECTLY INVOLVED.
51.52553 NON-VIRAL ASPECTS OF LEUKEMIA IN RATS.
51.525535 SHAY CHLOROMA (CHLOROLEUKEMIA) IN RATS.
51.52554 LEUKEMIA IN OTHER ANIMALS.

51.5255401 LEUKEMIA IN DOGS.
51.52554071 GUINEA PIGS (L2C/NB LEUKEMIA).
51.5256 NON-VIRAL ASPECTS OF LYMPHOMA AND RELATED TYPES OF RETICULOENDOTHELIAL TUMOR CELLS OTHER THAN LEUKEMIA IN EXPERIMENTAL ANIMALS AND OTHER ANIMALS.
SEE ALSO: 51.4523 FOR ALL VIRAL ASPECTS.
SEE ALSO: 51.5118253 FOR LYMPHOMA CELL LINES.
51.52561 GENERAL.
51.525611 CYTOLOGY AND HISTOLOGY OF LYMPHOMA IN ANIMALS.
51.52562 LYMPHOSARCOMA IN ANIMALS.
51.52564 PLASMA CELL TUMORS AND PLASMA CELL MYELOMAS IN ANIMALS.
MURINE PLASMACYTOMAS (X-5563) AND PROPERTIES OF THESE TUMORS (CRYSTALS AND RUSSELL BODIES IN THESE CELLS).
PLASMA CELL TUMOR ADJ-PC-5.
SEE ALSO: 51.41252701 FOR INDUCTION OF THIS TUMOR BY MINERAL OIL.
51.52565 MOUSE THYMOMA (IN C57 BL MICE).
ROLE OF VIRUS, IRRADIATION, URETHANE AND OTHER CHEMICAL CARCINOGENS.
51.52566 OTHER TYPES OF ANIMAL LYMPHOMAS.
51.5256601 MALIGNANT LYMPHOMA IN AKR MICE.
51.5256602 HAMSTER LYMPHOMAS.
51.52566032 COWS.
MALIGNANT LYMPHOMA IN COWS AND RELATED TUMORS OF BONE MARROW, SPLEEN AND OTHER ERYTHOID TISSUES.
51.5256604 IN PRIMATES.
51.526 POLYCYTHEMIAS AND OTHER CANCER AND RELATED BLOOD CONDITIONS IN HUMANS AND EXPERIMENTAL ANIMALS.
POLYCYTHEMIA VERA, POLYCYTHEMIA RUBRA.
POLYCYTHEMIA RUBRA VERA (ERYTHEMIA).
ERYTHREMIA.
OSLER-VAQUEZ OR VAQUEZ DISEASE AND OTHER ERYTHROCYTE HYPERPLASIAS.
ERYTHROLEUKEMIA.
SEE ALSO: 51.4512805 FOR ERYTHOBLASTS VIRUS.
51.527 RETICULOENDOTHELIAL CELLS TUMORS.
KUPPFER CELL SARCOMA IN RATS.

51.53 CANCER OF MUSCLE TISSUES: MYOMAS.
SEE ALSO: 51.5823 FOR APONEUROTIC-RELATED TUMORS.
51.531 GENERAL.
51.532 LEIOMYOMAS AND LEIOMYOSARCOMAS.
51.533 RHABDOMYOSARCOMAS.
51.534 MYOBLASTOMAS.
SEE ALSO: 51.5824 FOR SCHWANNOMA.
51.535 PROLIFERATIVE MYOSITIS.

51.54 CANCER OF THE KIDNEY, BLADDER, AND ASSOCIATED DUCTS AND TRACTS.
51.541 GENERAL: URINARY SYSTEM CANCER.
51.542 KIDNEY CANCER.
RENAL CELL CARCINOMAS (RENAL ADENOCARCINOMA, HYPERNEPHROMA, GRAWITZ TUMOR, CLEM CELL CARCINOMA, RENAL PARENDYMAL CARCINOMA).
SEE ALSO: 51.8432 FOR LUCKE RENAL ADENOCARCINOMA AND OTHER FROG KIDNEY TUMORS.
SEE ALSO: 51.55522 FOR "MESONEPHROMA" OF THE OVARY.
51.542081 HYPERNEPHROMA.
51.542141 NEPHROBLASTOMAS.
51.542231 WILMS TUMOR.
51.543 BLADDER CANCER.
51.544 CANCER OF THE URETER AND URETHRA; PAPILLARY TUMORS OF THE URETER.
PERIURETHRAL GLANDULES AND DUCTULES.

51.55 CANCER OF SELECTED INTERNAL ORGANS AND EXOCRINE GLANDS.
51.550 CANCER OF THE VISCERA, ABDOMEN, AND PERITONEAL CAVITY IN GENERAL.
51.551 CANCER OF THE EXOCRINE GLANDS.
SEE ALSO: 51.453192 FOR PRESENCE OF SALIVARY GLAND VIRUS IN SALIVARY GLANDS.
51.5511 GENERAL.
51.552 CANCER OF LUNG, THORAX AND CHEST.
SEE ALSO: 51.592 FOR CANCER IN THE THROAT AREA.
51.5521 GENERAL.
51.5522 LUNG CANCER (PULMONARY CANCER).
SEE ALSO: 51.43223 FOR PRODUCTION OF LUNG CANCER BY BERYLLIUM.
SEE ALSO: 51.753 FOR MUSCLE WEAKNESS ASSOCIATED WITH SMALL CELL CARCINOMA OF THE LUNG.

51.55221 GENERAL.
51.55222 TYPES OF LUNG CANCER.
"PSEUDO TUMORS" OF THE LUNGS.
LUNG METASTASIS.
51.5522201 ADENOCARCINOMA.
51.5522202 ALVEOLAR CELL TUMORS.
51.5522203 EPIDERMOID CARCINOMA.
51.5522204 BRONCHIAL CARCINOMA.
51.5522205 OAT CELL CARCINOMA OF THE LUNG.
51.5522206 "PSEUDO TUMORS" OF THE LUNGS.
51.55223 DETAILED CYTOLOGICAL STUDIES AND CELL TURN OVER AND EPITHELIAL KINETICS AND RELATED PHYSIOLOGY.
51.55224 METASTASIS OF LUNG TUMORS.
51.553 CANCER OF THE LIVER; HEPATOMAS AND ASITES HEPATOMAS AND GALL BLADDER.
NOVIKOFF HEPATOMAS (SOLID AND ASCITES FORMS).
51.5531 GENERAL.
51.5532 IN HUMANS.
51.5533 IN EXPERIMENTAL ANIMALS.
51.5537 CANCER OF THE GALL BLADDER AND RELATED BILE TRACTS.
CHOLANGIOMAS.
ADENOCARCINOMA OF THE GALL BLADDER.
SEE ALSO: 51.604 FOR BIOCHEMISTRY OF MINIMUM DEVIATION HEPATOMAS.
51.5538 HEPATOBLASTOMAS.
51.554 CANCER OF THE GASTRO-INTESTINAL TRACT.
51.5541 GENERAL.
51.5542 SPECIFIC GASTROINTESTINAL TUMORS.
51.55421 CARCINOID TUMORS AND MALIGNANT CARCINOID TUMORS OF STOMACH, SMALL INTESTINE, APPENDIX OR COLON.
SEE ALSO: 51.62233 FOR TRYPTOPHANE METABOLISM IN PATIENTS WITH THESE DISEASES.
SEE ALSO: 51.76182 FOR CARCINOID SYNDROME IN PATIENTS WITH NON-CARCINOID TUMORS.
SEE ALSO: 51.62233 FOR TRYPTOPHANE METABOLISM IN THESE PATIENTS.
51.5543 CANCER OF THE UPPER PART OF THE GASTROINTESTINAL TRACT.
51.55431 GENERAL.
51.55432 ESOPHAGEAL CANCER; TRACHEOBRONCHIAL CHONISTOMA.
SEE ALSO: 51.591 FOR CANCER OF THE ORAL CAVITY AND RELATED AREAS.
51.5544 CANCER OF THE STOMACH (GASTRIC CANCER) OR CANCER OF STOMACH AND INTESTINE WHEN CONSIDERED TOGETHER.
51.55441 GENERAL.
51.55442 IN HUMANS.
51.55443 IN ANIMALS.
51.5545 CANCER OF THE LOWER GI TRACT OR CANCER LIMITED TO THE SMALL AND LARGE INTESTINE (WHEN CONSIDERED INDEPENDENTLY OF STOMACH CANCER).
51.55451 GENERAL.
51.55452 SMALL INTESTINE.
51.55453 LARGE INTESTINE AND COLON.
51.5546 CANCER OF THE RECTUM AND ANAL CANAL.
CLOACOGENIC CARCINOMAS.
SEE ALSO: 51.767 FOR ENDOCRINE ASPECTS.
51.5547 CANCER OF THE PANCREAS.
51.555 CANCER OF THE REPRODUCTIVE ORGANS AND RELATED TISSUES, INCLUDING TERATOMAS.
51.5551 GENERAL.
51.5552 CANCER OF THE FEMALE GONADS AND ACCESSORY SEX TISSUES.
SEE ALSO: 51.7662 FOR ENDOCRINE ASPECTS OF THESE TUMORS.
51.55521 GENERAL.
51.55522 OVARIAN CANCER.
CYSTADENOMAS OF OVARY.
ESONEPHROMAS OF OVARY.
SEROUS CARCINOMA OF OVARY.
MERCROID AND MUCINOUS TUMORS OF OVARY.
ENDOMETRIAL CELL TUMORS OVARY.
GERM CELL TUMORS OF OVARY.
DERMOID CYST.
STRUMA OVARII.
ARRHENOBLASTOMAS.
BILATERAL OVARIAN TUMORS.
BRENNER TUMORS.
THEROMAS AND THELIOMAS.
DYSGERMINOMAS.
TERATOCARCINOMAS OF THE OVARY.
EMBRYONAL CARCINOMA (ENDODERMAL SINUS TUMOR OR MESONEPHROMA OF THE OVARY).

LIPID CELL TUMORS OF THE OVARY.
51.55523 CANCER OF THE UTERUS, CERVIX, ENDOMETRIUM AND PLACENTA.
51.555231 GENERAL.
51.555232 CANCER OF THE CORPUS UTERI.
51.555233 CANCER OF THE CERVIX.
51.555234 CANCER OF THE PLACENTA AND ENDOMETRIUM.
TROPHOBLASTIC DISEASES.
TROPHOBLAST-CHORIOCARCINOMA.
CHORIOADENOMA AND CHORIOADENOMA DESTRUENS.
CHORIOCARCINOMA.
MOLAR PREGNANCIES (INVASIVE MOLE, MALIGNANT MOLE, HYDATIDIFORM MOLE).
51.5552343 OTHER ENDOMETRIAL CANCER.
SEE ALSO: 51.55522 FOR "MESONEPHROMA" OF OVARY WHICH MAY BE AN ENDOMETRIOID TUMOR.
51.555235 CANCER OF THE OVIDUCTS AND FALLOPIAN TUBES.
51.555241 GENERAL.
51.555244 METASTASIS OF BREAST CANCER.
SEE ALSO: 51.555229 FOR KRUKENBERG TUMORS.
51.55525 CANCER OF THE VAGINA AND FEMALE GENITALIA.
51.555251 GENERAL.
51.555252 CANCER OF THE VULVA.
51.5553 CANCER OF THE MALE GONADS AND ACCESSORY SEX TISSUES.
SEE ALSO: 51.7663 FOR ENDOCRINE ASPECTS OF THESE TUMORS.
51.55531 GENERAL.
51.55532 TESTICULAR CANCER AND TESTICULAR TERATOMAS (TERATOMA TESTIS).
TERATOMA TESTIS.
SERTOLI CELL TUMORS.
LEYDIGOMA.
SEMINOMAS.
TERATOCARCINOMA OF THE TESTIS.
CHORIOCARCINOMA OF THE TESTIS.
EMBRYONAL CARCINOMA OF THE TESTIS.
SEE ALSO: 51.5554 FOR TERATOMAS IN GENERAL.
51.55533 CANCER OF THE PENIS AND SCROTUM.
51.55534 CANCER OF THE PROSTATE.
51.55535 CANCER OF THE VERUM ONTANUM AND UTRICLE (UTERUS MASCULINUS).
OTHER GERM CELL TUMORS INCLUDING EMBRYONAL CARCINOMAS.
SEE ALSO: 51.55532 FOR TESTICULAR TERATOMAS.
SEE ALSO: 51.4766 FOR TERATOCARCINOGENESIS AND THE ROLE OF EBM (EPITHELIAL BASEMENT MEMBRANES) IN THE DEVELOPMENT OF TERATOMAS.
SEE ALSO: 45.512 FOR TERATOLOGY IN GENERAL.
SEE ALSO: 51.56 FOR TERATOGENIC AGENTS.
51.55541 GENERAL.
51.55542 GERMINOMAS (SEMINOMA, DYSGERMINOMA).
51.55543 TERATOMAS AND TERATOCARCINOMAS.
51.556 CANCER OF THE ENDOCRINE GLANDS.
SEE ALSO: 51.555 FOR TUMORS OF THE TESTIS, OVARY, AND REPRODUCTIVE TISSUES.
SEE ALSO: 51.76 FOR TUMORS OF ALL OTHER ENDOCRINE GLANDS AND FOR ENDOCRINE ASPECTS OF ALL TUMORS.

51.56 CANCER OF NERVOUS TISSUE AND THE BRAIN.
51.561 GENERAL.
51.562 CANCER RELATED TO NERVES AND PERIPHERAL AND AUTONOMIC NERVOUS SYSTEM.
PARAGANGLIOMAS.
GANGLIONEUROBLASTOMAS.
GANGLIONEUROMAS.
APPENDICEAL NEUROMAS.
NEUROEPITHELIOMAS.
GASTRIC NEURAL POLYPS.
51.563 OPEN.
51.564 OPEN.
51.565 BRAIN TUMORS.
51.565051 EPENDYMOBLASTOMA.
51.565131 MEDULLOBLASTOMAS.
51.565132 MENINGEAL NEOPLASIA (CARCINOMATORY MENINGITIS).
51.565132 MENINGIOMAS AND LEPTOMENINGEAL TUMORS.
51.5653 GENERAL.
51.5654 HISTOLOGICAL, CYTOLOGICAL AND HISTOCHEMICAL STUDIES.

51.57 CANCER OF THE SENSE ORGANS.
51.571 GENERAL.
51.572 CANCER OF THE EYE.
RETINOBLASTOMA; ITS RELATION TO ABNORMAL CHROMOSOMES OF THE "D" GROUP.
MELANOMA OF THE EYE (OF THE UVEA AND IRIS).
MELANOMA OF THE CHOROID.
HARDERIAN GLAND TUMORS.
SEE ALSO: 51.51508 FOR MELANOMAS IN GENERAL.
51.573 CANCER OF THE EAR AND INNER EAR.
51.581 GENERAL.
51.582 CANCER OF SPECIFIC CONNECTIVE TISSUE AND MESENCHYMAL STRUCTURES.
51.5821 GENERAL.
CYTOLOGY AND ULTRASTRUCTURE STUDIES OF CONNECTIVE TISSUE TUMORS AND THE GROUND SUBSTANCE.
51.5822 SARCOMAS (GENERAL).
51.58221101 KOPOSIS SARCOMA.
51.58223 GENERAL.
51.5824 TUMORS OF ADIPOSE TISSUES (HIBERNOMAS).
51.5825 OTHER XANTHOMAS.
CHONDROMATOUS TUMORS.
CHONDROBLASTOMAS AND GRANULAR CELL TUMORS.
51.5826 GRANULOMAS.
51.583 SKIN CANCER AND OTHER EPIDERMAL TUMORS AND HYPERPLASIAS AND PIGMENT CELLS.
SEE ALSO: 51.525425 FOR MYCOSIS FUNGOIDES (A LYMPHOMATOUS CANCER).
51.5831 GENERAL.
51.58311 GENERAL.
51.58312 BIOCHEMISTRY OF SKIN CANCER.
51.5832 SKIN MELANOMAS AND MELANOCYTOMAS AND RELATED PIGMENTED HYPERPLASIAS AND NEVIS AND JUNCTION NEVI.
EPITHELIOID CELL NEVI.
SPINDLE CELL NEVIS.
BALLOON CELL NEVI.
BLUE NEVI.
NEVI SPILUS.
NEVUS OTA.
ACANTHOSIS NIGRICANS.
SEE ALSO: 51.51508 FOR MELANOMAS IN GENERAL AND RELATED CROSS REFERENCES.
SEE ALSO: 51.62234 FOR BIOCHEMICAL ASPECTS OF TYROSINE METABOLISM.
51.58321 GENERAL.
51.58322 IN HUMANS.
DUBREUILH'S PRECANCEROUS MELANOSIS.
MALIGNANT NEVOCYTOMA.
LENTIGO SENILIS.
LENTIGO SIMPLEX.
FORTNER'S MELANOMA.
51.583223 IN ANIMALS.
51.5833 BASAL CELL CARCINOMA AND "BASAL CELL NEVUS SYNDROME".
GENETIC ASPECTS OF THIS DISEASE.
SEE ALSO: 51.5150 FOR NEVI IN GENERAL.
51.58331 BASAL CELL NEVUS SYNDROME.
51.5835 KERATOSES AND KERATINIZING NEOPLASMS.
SEBORRHEIC KERATOSIS.
ACTINIC KERATOSIS.
KERATOACANTHOMA.
51.5836 OPEN.
51.5837 SEBACEOUS AND SWEAT GLAND TUMORS AND TUMORS INVOLVING THESE STRUCTURES.
51.583901 SKIN RETICULOSES.
51.583902 BOWEN'S DERMATOSIS.
51.5839031 CANCER RELATED TO XERODERMA PIGMENTOSUM.
51.584 CANCER OF THE BONE AND MINERALIZED TISSUES.
SEE ALSO: 51.52535 FOR TUMORS OF THE BONE MARROW (MULTIPLE MYELOMA).
SEE ALSO: 51.83252 FOR CANINE OSTEOSARCOMAS.
51.5841 GENERAL.
51.5842 BONE.
51.584211 GENERAL.
51.584212 CYTOLOGY, HISTOLOGY, AND HISTOCHEMISTRY.
51.58423 BONE SARCOMAS.
CHONDROMYXOID FIBROMA.
RETICULUM CELL SARCOMA OF BONE.
PAROSTEAL SARCOMA.
OSTEOSARCOMA.
OSTEOCHONDROMAS.

CHONDROBLASTOMAS.
CHONDROBLASTOMAS.
CHONDROSARCOMA.
EWING'S SARCOMA.
GIANT CELL SARCOMA OF BONE.
FIBROSARCOMA OF BONE.
51.58423031 CHORDOMA (FROM PRIMITIVE NOTOCORD VERTEBRAE OF VERTEBRAL SKELETON OR SPHENOID).
51.5843 ODONTOGENIC TUMORS.
AMELOBLASTOMA.
ADAMANTINOMA.
51.585 ADIPOSE TISSUE TUMORS.
51.5851 GENERAL.
51.5852 LIPOMAS.
51.5853 HIBERNOMAS.

51.59 CANCER OF SELECTED BODY STRUCTURES.
51.591 CANCER OF THE ORAL CAVITY AND ASSOCIATED STRUCTURES.
51.5911 GENERAL; HEAD AND NECK CANCER IN GENERAL.
CHERUBISM (TUMOR OF JAW BONE WITH COLLAGEN CUFFS).
51.5912 CANCER OF THE ORAL CAVITY (LIPS, TONGUE, ORAL MUCOSA).
51.59121 OPEN.
51.59122 EPITHELIAL AND SQUAMOUS CELL CARCINOMA.
HISTOLOGICAL AND CYTOLOGICAL STUDIES ONLY.
51.5913 CANCER OF THE THROAT, NASAL CAVITY, PHARYNX, LARYNX, AND VOCAL CORDS.
SEE ALSO: 51.5543 FOR CANCER OF THE ESOPHAGUS.
51.5914 CANCER OF THE SINUSES AND HEAD CAVITIES.
51.59141 GENERAL.
51.59142 TUMORS ORIGINATING IN MAXILLARY ANTRIUM.
51.59143 NOSE AND NASAL SEPTUM.
51.59144 ETHNOID.
51.59145 CANTHUS.
51.59146 ORBIT.
51.59147 TURBINATE.
51.5915 CANCER OF THE FACE AND EARS.
51.592 OPEN.
51.593 CANCER OF THE APPENDAGES (GENERAL).
CANCER OF THE ARMS, LEGS, HANDS, FEET, FINGERS, AND TOES.
51.594 METASTASES (GENERAL).
51.59401 GENERAL.
51.59402 METASTASIS IN LYMPH NODE.
51.59403 METASTASIS IN BONE.